



Temple Bar and Fleet Street, 1796.

THE DEVELOPMENT OF LONDON AND THE LONDON BUILDING ACTS.

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THE growth of London and the growth of its Building Acts are so intertwined and interdependent that it is somewhat curious that so little research has been made into the origins of those laws and regulations which have had such an important bearing in the forming of Modern London. We look at an old building which has weathered the centuries with a sympathetic interest, and we strive to piece together its history, bit by bit, from the features, one by one, that we can put a date on. Here a door has been inserted, here a window or arch or arcading of later date, until the finished fabric affords to the seeing eye an open book wherein one may read of the labours and thoughts of the bygone centuries. Has it ever occurred to us to analyse in the same way the structure of the enactments on which London has been framed? Sometimes one hears suggestions as to the inconsistency of various sections and regulations. It may be so. Is it any wonder, when we consider that perhaps one section, in its essence at least, has stood the test of seven hundred years of argument between the building owner and his neighbour, another perhaps is reminiscent of the days when the only fire protection was the parish "squirt," and yet another comes white-hot from the neo-modern theories of the structural engineer? The marvel is that the finished edifice stands so well and looks so shapely, on the whole, despite the heterogeneous origin of its material parts.

A very brief sketch of the origins of London may serve to remind us of the various stages in the growth of this wonderful city of ours.

ROMAN AND MEDIEVAL LONDON.

The site of the first Roman City and the lines of its general lay-out have undoubtedly greatly influenced the development of London through the ages. Of that old city much has been written and still more conjectured, but of the many things we may know with certainty, one is undoubtedly that



Baynard's
Castle.

Guildhall.
Bow Church (Roman Temple).
Queenhithe.

Mansion House.
Dowgate.

Gresham College (Roman Pavements).
Leadenhall.
Old London Bridge. Billingsgate.

OGILBY'S MAP, 1677, SHOWING TRACES OF RECTANGULAR ROMAN STREET PLAN.

NOTE.—King Street and Queen Street, leading to the Guildhall, were made after the Fire of 1666.

The Roman building laws were enforced in Londinium Augusta as elsewhere in the empire, and some of these, too, may even have had their influence in shaping or modifying later ideals. The streets within the comparatively restricted area of the first settlement were apparently laid out in the regular rectangular fashion, and there is no reason to doubt that the general rectangular arrangement of the walls and streets was extended considerably during the 400 years of the Roman occupation, though

it is probable that there was a considerable amount of open space within the outer enclosing walls, in addition to the areas of reserved land outside the walls belonging to the city and kept for defensive purposes.

Professor Haverfield has contributed some very valuable information for students of the Roman town plan. He himself thinks that in London no street to-day follows the course of any Roman street. Before, however, accepting this conclusion in its entirety let us consider one or two general principles which he lays down as almost universal in Roman colonial cities.

The town areas are divided by two main streets (north and south, east and west), into four parts, and by other and parallel streets into square or oblong house blocks (insulae), and the rectangular scheme is carried through with some geometrical precision.

The insulae are fairly uniform in size, but those on the north side of the east and west street are often larger than the rest. In most towns, though not in all, the dimensions of the insulae show a common element. In length or in breadth, or in both, they approximate to 120 feet or some multiple of that. The unit of Roman land surveying, the "iugerum," was a rectangular space of 120 by 240 Roman feet—in English feet a trifle less. The general practice in this respect seems clear and is found elsewhere in Britain (at Silchester).*

Ogilby's map of 1677 shows us London as it was before any of the street improvements of modern times, and thus forms a useful basis for testing these conclusions—taking as our starting points on this map first the known line of the outer Roman wall; then Wren's clear statement of the existence of the Roman causeway, 18 feet deep, at Bow Church, Cheapside, exactly beneath the tower; then the finding in 1786 in Birchin Lane, 14 feet deep, of a rough chalk pavement coinciding with the line of this same east and west road.

Exactly half-way along this axis line is the existing Mansion House, where formerly was the "Stocks Market," for centuries the traditional centre of the Roman city.

Approximately equidistant on each side of this central point we have westward the Roman Temple recorded by Wren on the site of Bow Church, and eastward the Basilica near Leadenhall recorded by Sir William Tite and others.

A line north and south from the Stocks Market follows as nearly as possible the line of Walbrook, terminating at Dowgate on the river bank.

Taking the eastern boundary of the first Roman city as Billingsgate, we have old London Bridge immediately south of the Leadenhall Basilica, then Dowgate on our central axis. The port of Queen Hithe immediately south of Bow Church with its earlier Roman Temple, and the site of Baynard's Castle (a traditional Roman stronghold), is again equidistant from our axis line. It is curious, too, that the Guildhall, another old site at one time extending to Aldermanbury, is in a central position on the same axis as Queen Hithe and Bow Church.

Turning now to the particulars given by Professor Haverfield, we find that the east and west line, which represents almost the actual line of Cheapside continued in a straight line east and west, is exactly half-way between London Wall and the River, and all three almost exactly parallel. The original line of Cannon Street is again parallel and almost exactly half the distance between Cheapside and the River. Nearly all the subsidiary streets will be seen to be roughly at right angles to these lines.

Finally, the dimensions of the insulae forming the rectangular blocks will be found to agree almost exactly with those laid down by Professor Haverfield.

Let no one say that modern London is not a lineal descendant, at any rate, of the ancient Londinium Augusta. That the Roman city was a very complete and highly advanced community cannot be doubted, and it is difficult to believe that its traces could have disappeared in the short period intervening between the gradual withdrawal of Roman troops and the firm seating of Saxon power. Much more probable is it that the citadel or earlier city was fully maintained during this period, and that tracks like *Walling Street*, or, in Stow's spelling, *Watheling Street*, were formed across the lines of the outer city to afford easy access to the citadel. The building materials

* Professor Haverfield, *Ancient Town Planning*, pp. 77, 79, 142.

alone must have formed a valuable quarry for a generation or two in search of stone or tile wherewith to complete or repair the defences of the city. To this necessity for defence may be due the fact that the line of the Roman Wall is everywhere clearly traceable, though the exact line of the streets must still be the field for further research.

EARLY ATTEMPTS AT FIRE PREVENTION.

For seven centuries London building was at a standstill, but with the election of her first Lord Mayor, in 1189, the second chapter of London's building history begins. Like many another authority since, FitzAlwyne, the new Mayor, saw the need for regulating the buildings which no doubt began to spring up in considerable numbers on the establishment of more settled conditions after the Conquest. The London Assize of 1189, the first year of Richard I., although it dates back before the formation of our Parliamentary system, had all the force of a modern Act of Parliament, and in its details it affords a most valuable insight into the conditions of the times. Stow tells us that it remained in force for upwards of 200 years. The pity of it is that, although the Act remains, the buildings have long since disappeared. We may well wonder whether the existing Building Acts will ever survive as the only record of our present-day buildings.

FitzStephen's attractive account of London, written about thirty years before this, records that "The only pests of London are the immoderate drinking of fools and the frequency of fires."

FitzAlwyne's Assize of 1189, although aimed against the spread of fire, was not intended to be compulsory but rather permissive in character, and to facilitate the erection of stone party walls to separate premises belonging to different owners, and "especially for appeasing contentions which sometimes arise among neighbours." Up to this date the greater part of the city had been built of wood, roofed with straw, reeds, and similar materials, and the great fire in the first year of King Stephen (1136), which destroyed practically the whole city, was still in painful remembrance. It appears from the opening statements that after this widespread fire the more wealthy citizens rebuilt their houses with stone party walls and covered the roofs with thick tiles, but that wood and thatch were still in general use.

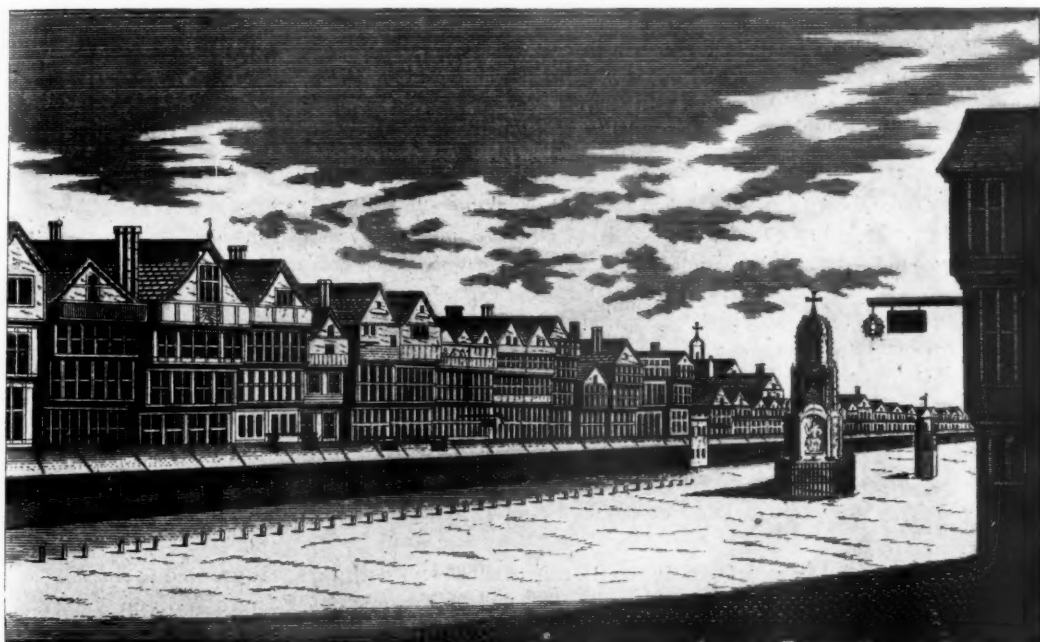
When two neighbours agreed to build between themselves a stone party wall, each had to give a foot and a half of land, and a wall 3 feet thick and 16 feet high was built at their joint cost, and provision was also made for a party gutter. A right to raise the wall to a greater height was also stipulated provided the building owner paid the expense, but no pulling down or alteration was allowed without consent. It is somewhat remarkable that this height of 16 feet occurs in the present day Building Acts in connection with requirements as to open space, and is also a limit frequently imposed on projecting shops. The thickness of 3 feet was no doubt intended to provide an abutment for vaulting, and it is to be noted that recesses were allowed if they did not exceed one foot deep, thus leaving a minimum thickness of one foot. In case of the poverty of the adjoining owner, or obstinacy on his part as to sharing the expense, he was to give up 3 feet of land, and the other to pay the cost of the wall. A somewhat curious stipulation was that when a man built his own stone wall on his own boundary, his neighbour was called upon to provide the necessary gutter under the eaves to take off the water. Corbel stones in such a wall could not be removed or altered without consent. The sanitary accommodation or pit for the "necessary chamber" had to be $3\frac{1}{2}$ feet from the neighbour's land, unless lined with stone, when it need only be $2\frac{1}{2}$ feet distant.

It is evident that "ancient lights" did not worry architects seriously in those days, for it is expressly stipulated that "if any one have windows looking towards the land of a neighbour, and although he and his predecessors have been long possessed of the view of the said windows, nevertheless his neighbour may lawfully obstruct the view of those windows by building opposite to them on his own ground, unless he who hath the windows can show any writing whereby his neighbours may not obstruct the view of those windows."

The height of buildings seems to have been a matter of sentiment. Public feeling was outraged when anyone built higher than his neighbours, and we have on record the sad fate of at least two people who attempted to thus overlord the community. As the chronicler says :

"One Sir John Champneis, alderman and mayor, built in his house a high tower of brick, the first that was ever heard of in any private man's house to overlook his neighbours, and this delight of his eye was punished with blindness before his death.

"Another, Richard Wethell, merchant tailor, built a fair house with a high tower, the second in number and first of timber that ever I learnt to have been built to overlook neighbours in this city. This Richard, then a young man, became in a short time so tormented with gouts in his joints of the



CHEAPSIDE AND THE CROSS.

From *Memorials of Old London*. (Bemrose, 1908.)

hands and legs, that he could neither feed himself nor go further than he was led, much less was he able to climb and take the pleasure of the height of his tower."

Modern methods of procedure and those of mediæval times do not greatly differ, for in the very next reign we find an Amendment Act or Further Ordinance to regulate London building (Ordinance of King John, 1212). This second series of regulations was to some extent "panic legislation," brought about in consequence of the serious fire of the 11th July 1212. All alehouses, except by special licence, were forbidden unless of stone. Bakehouses and brewhouses were not to use reeds or straw, but wood fuel. Cookshops, bakehouses, and other trade premises were to be whitewashed and plastered inside and out as a preventive from fire, and all superfluous woodwork removed. Even nowadays lime-whiting of timber is a common enough requirement.

No special mention is, however, made of chimneys or flues, which were not yet apparently in universal use. Curiously enough bricks are not mentioned, though there are many references in the early records to "tuyles."

A general admonition was given to whoever wished to build "to take care as he loveth himself and his goods, that he roof not with reed nor rush, but with tile only or shingle or boards or lead." All thatched houses were to be plastered over within eight days, under pain of being demolished. All wooden houses in Cheapside were to be pulled down or amended to the satisfaction of the Mayor and Sheriffs. Finally, although no special means of escape were stipulated, the Aldermen of each ward were to have "a proper hook or cord," and fire appliances were to be provided during the summer months in front of every house in the form of a tub, either of wood or stone, full of water.

REGULATIONS AS TO PROJECTIONS.

Still further regulations were made dealing with projections from buildings. All penthouses and "jettees" (a general name for projections) of houses were required to be at least 9 feet high, so that folks on horseback might ride beneath them. Irregular structures of this description were required to be removed or altered within forty days under a penalty of 40s. The amount of the penalty has not altered during the last 700 years! No stall was to project from the house to which it belonged more than $2\frac{1}{2}$ feet, a dimension which to the present day is retained to limit projecting cornices.

EARLY CITY EXTENSION AND TOWN PLANNING.

The days of Edward I. were great in building development. Not only were the city walls of London extended to include the monastery of Blackfriars (1282), but many new towns in all directions were planned and built under Edward's orders. The new town of Winchelsea dates from this period, and there are many mediæval towns in Guienne and Aquitaine founded by Edward I. Montpazier, the most regular of English towns in Aquitaine, is of this date, and at Libourne the streets were planned as wide as 30 feet (or five toises of 6 feet each). In 1298 Edward I. wrote from Bordeaux asking for four expert town planners to be sent out.

"The most clever and able and those who best know how to divide order and arrange a new town in the manner that will be most beneficial for us and for the merchants, and who shall be ready and willing to go for that purpose wherever we may send them."

These New Towns or Free Towns may still be recognised by the names of Ville-Neuve and Ville-Franche so frequently met with in Southern France (Parker, *Domestic Architecture in England*, Vol. ii. p. 157).

London continued to grow. On the south side of the river Southwark was granted to the City in 1327 by Edward III. on payment of £10 annually, and in the reign of Edward VI., on valuable consideration paid to the Crown, it was formed into a twenty-sixth ward, by the title of Bridge Ward Without (*Pennant*). Owing to the smoke nuisance in London and the suburbs the use of coal was prohibited in 1306. The city began to stretch out beyond its walls. The Forest of Middlesex and the Warren of Staines were disafforested in the second year of Henry III., since which time Stow says that the suburbs of London had "mightily increased with buildings."

EARLY LABOUR TROUBLES AND REGULATION OF WAGES OF WORKMEN.

Strikes and labour troubles are not altogether of recent creation. So long ago as the reign of Edward III. (1350) legislation was passed with the idea of keeping down wages, and the interesting Act of Henry VIII. concerning artificers and labourers was only one among a series of similar enactments (6 Henry VIII. cap. 3). The following extracts will show how the workmen fared in the days of the "much-married monarch":—

"No artificer nor labourer hereafter named shall take no more nor greater wages than as under . . . a freemason, master carpenter, roughmason, bricklayer, master tiler, plumber, glazier, carver or joiner:—

"From Easter to Michaelmas:—6d. by the day without meat and drink, or 4d. by the day with meat and drink.

"From Michaelmas to Easter:—5d. a day without meat and drink, or 3d. a day with meat and drink. . . .

And furthermore, where divers artificers and labourers waste most part of the day and do not deserve their wages, sometimes in late coming to their work, early departing therefrom, long sitting at their breakfast, at their dinner and at their noonmeat, and long time at sleeping at afternoon, to the loss and hurt of such persons as they be retained with in service:

"It is therefore established, enacted, and ordained that every artificer and labourer be at work between the middle of March and the middle of September before 5 of the clock in the morning, and that he have but half an hour for his breakfast and an hour and half for his dinner at such time as he hath season for sleep to him appointed by the statute.

"And at such time appointed that he shall not sleep, then he is to have but an hour for his dinner and half an hour for his noonmeat, and that he depart not from his work (in summer) till between 7 and 8 of the clock in the evening . . . and (in winter) they be at their work in the springing of the day and depart not till night of the same day."

It will be seen that there was no need to attach to a contract a schedule of rates of wages and hours of work. The following paragraph, too, shows that the men in the building trade of those days occasionally combined for other objects than raising wages:—

"If any artificer or labourer retained in service with any person for building or reparation do assault or make or cause to be made any assembly to assault, harm, or hurt any person assigned to control and oversee them in their working—he or they so offending shall have imprisonment for a year without bail."

In spite of this, the London men seem to have found means to bring pressure to bear, for the next year the Act was altered for their benefit, and (by 7 Henry VIII. cap. 5, as to labourers and artificers within the City of London) we read that

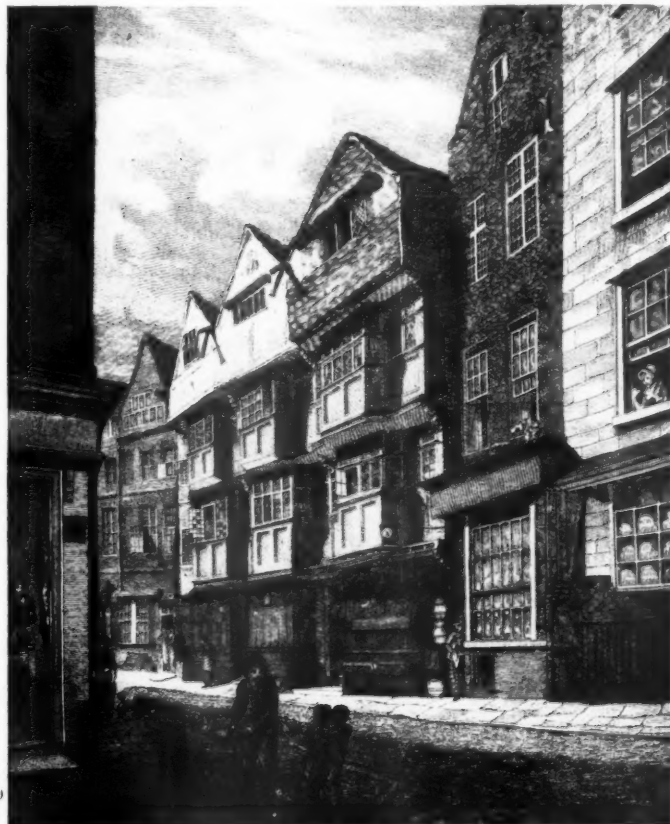
"In consideration of the great charge of their house rent, their victual and also that they be chargeable to and with divers offices as Constables Skavennship and other when it haps, and also with lot and scot, and with many other things in the said city used and accustomed which charges be more there than in any other place within this realm, be it enacted that from henceforth such artificers, &c., may take for their wages like wages as they did before the said Statute, the former Act notwithstanding (except outside the City of London or if engaged on the King's work)."

The laws as to wages were amended both by Queen Elizabeth (1562) and James I. (1604), the latter entrusting the decision of disputes respecting wages to justices, sheriffs, and mayors, whose jurisdiction was only finally abolished in 1813. All through the centuries the trades were keenly jealous of each other and of their own privileges, and we find such special Acts as that of 1603, which laid down that "no plasterer shall use the art of painting" (1 James I. cap. 20).

"Registrationists" may perhaps quote this as a useful precedent.

TUDOR ACTIVITIES.

After the Wars of the Roses were satisfactorily over the population continued to flow towards London, and throughout the Acts of Parliament from Henry VIII. onwards we find repeated attempts to get the people back to the country.



SHIP YARD, NEAR TEMPLE BAR.

Sewers Acts were passed to drain fen lands, Acts to repair and re-edify the various country towns (1514 and 1540), many of which "are now fallen down decayed and do lie desolate."

In London itself, however, this period was a very active one. *Paving Acts* were passed for the Strand (1532, previously paved by Richard II. and Henry VI.), Holborn and Southwark (1533), and many City streets (1540-2), including from Holborn westwards to St. Giles-in-the-Fields and Aldgate to Whitechapel Church.

Water had been laid on from Tyburn in 1238. An additional Water Act was now passed (35 Henry VIII. cap. 10) by which the Corporation was empowered to lay water from springs at Hampstead Heath, Marylebone, Hackney, Muswell Hill, and other places within five miles of the City, and later on additional water works were erected on London Bridge (1581) and also near Broken Wharf (1594). The great New River undertaking of Sir Hugh Myddelton, involving a canal 38 miles long, was completed still later, in 1613.

ATTEMPTS TO RESTRICT BUILDING.

In the early years of Elizabeth, however, the struggle to provide for the ever-increasing population was becoming an acute one. Doubtless the jerry-builder was doing his best to supply the need for small houses, and crowding as many houses as possible on to the acre, for in 1588 (31 Elizabeth, cap. 7) we find "an Acte against erectyng and mayntayninge of cottages, which are daily more and more increased in many parts of this Realme." By this Act an attempt was made to provide a limit, not for the number of buildings per acre, but for the number of acres per building. No cottage or building was to have less than four acres of ground (the penalty for infringement was £10 and 40s. for every month the offence continued), and no cottage was to be occupied by more than one family. This Act did not, however, refer to London or other large towns, and exception was made for coal-miners and similar workers.

It is curious to find even in Queen Elizabeth's time a general feeling of discontent and disparagement of their own times as compared with the "good old days." Listen to this, written a year or so before the Armada:—

"In times past, when our houses were built of willow, then had we oaken men; but now that our houses are come to be made of oak, our men are not only become willow, but a great many, through Persian delicacy crept in among us, altogether of straw." (W. Harrison, 1577.)

"Now have we many chimneys, and yet our tenderlings complain of rheums, catarrhs, and poses. The smoke in those days was both a sufficient hardening for the timber and a far better medicine."

The famous Act of Queen Elizabeth in 1592 (35 Elizabeth, cap. 6) forbidding any new building within three miles of the City of London is, of course, well known. Its opening words give a striking description of the overcrowded and insanitary state of London at a time when its outward appearance, as shown in Wyngaerde's map, was so attractive and picturesque.

The Act begins by referring to the evils from crowded buildings:—

"For the reformyng of the great Mischiefes and Inconveniences that daylie grow and increase by reason of the pesterling of Houses with diverse Famylyes, harboringe of Inmates and converting of great Houses into several Tenements or Dwellings and erectyng of New Buildings within the Cities of London and Westminster and other Places nere thereunto adjoining, whereby great Infection of Sickness and dearth of Victuals and Fuel hath growen and ensued and many idle vagrant and wicked persons have harboured themselves there and divers remote places of the Realme have been disappointed of Workmen and dispeopled: Be it enacted by the authoritie of this present Parliament, That noe person or persons of what Estate Degree or Condition soever shall from henceforth make and erect any newe Building or Buildings House or Houses for habitation or dwelling within either of the said cities (of London and Westminster) or within three miles of any of the gates" (following the lines of a previous proclamation of 1580).

The effect was considerably spoilt, however, by limiting the Act to seven years, and by allowing an exemption for larger houses assessed at anything above £5 per annum.

The modern idea of the healthfulness of an open belt of country was evidently beginning to make itself felt, for we find a strong prohibition against any further enclosure or encroachment on the numerous commons and open land within three miles of the city, such open spaces having been for many years "heretofore used for training and mustering of soldiers, and for recreation, comfort, and health of the people."

Elizabeth's attempt to stop the growth of London was as futile as Canute's to stop the rolling waves, but she and her successor, James I., persevered in the idea of stopping all building *except on old foundations*, and proclamations on even more stringent lines were issued in 1602, in 1603, 1604, 1607, and in 1615, this last having no exemptions whatever. The general interests of trade, the desire to encourage only skilled artisans, the fears of fire, plague, and famine, and the rapid increase of prices in every direction, all contributed to this line of policy. The privilege of building on "old foundations" still exists in a somewhat modified form. It is interesting also to find an instance of "certified plans" of old buildings so long ago as 1618. Many buildings erected on new ground were ordered to be pulled down by Order in Council, but the State Papers record at least one instance of such order for demolition of houses being countermanded, *on the certificate of the churchwardens that they were built on old foundations*.

Stow's picture of London growing out in all directions shows us eastward a long "continued street or filthy straight passage, with alleys of small tenements or cottages, along by the River of Thames, almost to Ratcliffe, a good mile from the Tower." In what he had known as an old country lane leading to the Manor of Shadwell he records that "in place of elm trees there are many small tenements raised towards Ratcliffe, and the suburb of Ratcliffe itself had been also increased in building eastward, in place where he had known a large highway with fair elm trees on both the sides, and hath now taken hold of Lime Hurst, corruptly called Limehouse."

"Also without the bars both the sides of the street be pestered with cottages and alleys, even up to Whitechapel Church, and almost half a mile beyond it, into the common field; *all of which ought to be open and free for all men*." "This common field," he says, "from being the beauty of the city on that part, is so encroached upon by building of filthy cottages and with other encroachments (notwithstanding all proclamations and Acts of Parliament) that in some places it scarce remaineth a sufficient highway for the meeting of carriages and droves of cattle. Much less is there any fair pleasant or wholesome way for people to walk on foot, which is no small blemish to so famous a city, to have so unsavoury and unseemly an entrance thereto."

Northwards from Bishopsgate towards Shoreditch was "a continual building of small and base tenements," for the "most part lately erected."

St. John's Street was "replenished with buildings up to Clerkenwell, and many fair houses built about the Priory which serveth as a parish church of St. John, not only for near inhabitants, but for all up to Highgate, Muswell, &c."

In the Strand was "a continual new building of divers fair houses as far as St. Martin's Lane."

A proclamation of James I., in 1605, required all persons "to build their fore front and windows either of brick or stone as well for decency as by reason all great and well grown woods are much spent and wasted, so as timber for shipping waxed scarce."

Under the Commonwealth Parliament, in 1656, still another Act was passed with the express intention of preventing "the multiplicity of Buildings in and about the Suburbs of London and within 10 miles thereof." The method of stopping unnecessary buildings was to impose a fine of one year's rent for every new dwelling house, outhouse, or other building upon a new foundation unless it had at least four acres of ground.

The Act also laid down that all houses should be built of brick or stone and "straight up without butting or jetting out into the street." An Act of six years later, however (14 Charles II. cap. 2), tells us that various sanitary reforms and street widenings are necessary by reason of the multitudes of houses lately built and from stopping of sewers, &c.

GROWTH OF CONSTRUCTIONAL REQUIREMENTS: THE ACT FOR REBUILDING THE CITY.

Now we come to the direct ancestor of our modern Building Acts. *The Act for rebuilding the City of London* after the Great Fire of 1666 (18 & 19 Charles II., cap. 8) provided the first complete code of building regulations. Although, no doubt, in its inception, it had some of the vices of panic

legislation, the great city being described as "now lying buried in its own ruins," it is remarkable for its statesmanlike grasp of the situation. The Act early states that "building with brick is not only more comely and durable but also more safe against future perils of fire," and the outside walls of all buildings in and about the city were henceforth to be of brick or stone, one solitary exception only being allowed "for the rebuilding of the Waterworks called Mr. Thomas Morris his Waterhouse adjoining to London Bridge," which was permitted to be rebuilt in timber, for the purpose of supplying the south side of the city with water "as it for almost this hundred years hath done."

For the better regulation, uniformity, and *gracefulness* of all new buildings they were to be divided into four classes, working upwards in quality :

First and least sort : fronting by-lanes.

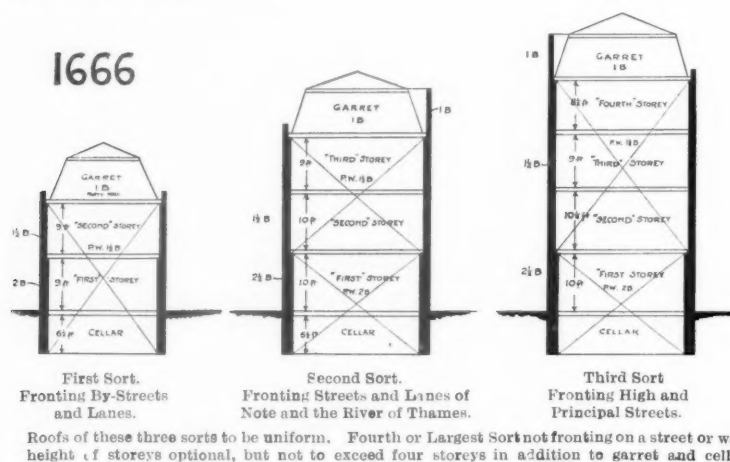
Second sort : fronting streets and lanes of note.

Third sort : fronting high and principal streets.

The roofs of all these classes were required to be uniform, and this restriction seems to have applied to all buildings, except the halls of the various companies and similar buildings.

Fourth and largest sort : Mansion houses for citizens or other persons of extraordinary quality not fronting either of the three former ways.

The object of the first three classes was to provide for varying thicknesses of wall and heights of storey, as shown on the diagram below.



In the fourth class, which consisted of mansion houses "of the greatest bigness" not fronting on any street, the number and height of storeys were left to the discretion of the builder, but not in any case to exceed four storeys (in addition to cellar and garret). The diagram may possibly even now be useful in identifying houses built under this Act immediately after the Great Fire. The scantlings of timber were also scheduled.

It is somewhat strange that sizes of timber are not now stipulated by the London Building Acts, though such a schedule is common enough outside the London area.

For the purpose of discovering and preventing irregular buildings, the Lord Mayor, Aldermen, and Common Council were empowered to appoint "one or more discreet and intelligent person or persons in the art of building to be the surveyors or supervisors to see the said rules and scantlings well and truly observed," and the surveyors or supervisors were "to take oath upon the Holy Evangelists for the true and impartial execution of their office" within their several precincts or districts.

The rebuilding of the city upon its ruins must have involved immense labour, and the streets had

first to be clearly marked and staked out. The penalty for interfering or moving the marks was three months' imprisonment, or a fine of £10, or if the offender happened to be a poor man "of low and mean condition" he was "to be openly whipped neere unto the place where the offence shall be committed till his body be bloody."

The setting out of the party walls equally on each owner's land appears to have been one of the first duties of the newly appointed surveyors. No fee was apparently provided for this, and the additional Act passed four years later (1670) prescribed a flat rate of 6s. 8d. in respect of each foundation; to make things fair all round, this was made retrospective, and no foundations were to be laid until the surveyor had viewed them. The adjoining owner was not permitted to build until he had paid one-half the cost of the party wall, with 6 per cent. interest. In case of dispute the matter was to be referred to the Alderman of the Ward as "Arbitrator."

The following "projections" were allowed in such streets as were declared by the Common Council as "high" streets:

"Balconies" 4 feet broad, with rails and bars of iron, of equal distance from the ground, not to exceed two-thirds of frontage.

Porches or penthouses of the same width were allowed in the remaining portion of the frontage if covered with lead, slate, or tile, and ceiled with plaster.

The water from both balcony and penthouse had to be conveyed into the channels by party pipes, and the pavements under such projections to be paved with flat stone.

One circular step was allowed outside the building, but the ground floor (then called the first floor) was not to be more than 18 inches or less than 6 inches above the street.

Stallboards of shop windows were allowed to project 11 inches into the street.

No house was allowed to extend beyond the ancient foundation, and the same limit applied to posts, seats, or similar projections; no cellar gratings were allowed beyond the front of the house.

It will be seen how very similar these stipulations are to section 73 of the 1894 Act.

Noisome and perilous trades might be prohibited in the principal streets, by order of the Lord Mayor.

Additional general constructional rules were as under:

In every foundation within the ground add one brick in thickness to be set off in three courses equally on both sides.

No timber within 12 inches of the front of the chimney jambs, and all joists at the back of any chimney to be trimmed 6 inches from the back.

No timber to be laid within the tunnel (flue) of any chimney upon penalty to the workman of 10s. (and 10s. every week it continues unreformed).

No joists or rafters to be more than 12 inches apart and no quarters at greater distance than 14 inches.

Span of all joists limited to 10 feet and of single rafters 9 feet.

All roofs, window frames and cellar floors to be made of oak.

Tile pins of oak.

No summers or girders to lie over the head of doors and windows.

No summer or girder to lie less than 10 inches into the wall, no joists than 8 inches and to be laid in "lome."

If any ground was left open and not built upon for three years, the Common Council had power to serve notice to build, and in default to sell the land on the owner's behalf.

The raising of prices of building materials by means of "rings" or combinations was evidently not unknown, for we find a provision enabling two Judges of the King's Bench to fix the prices of brick, tiles, and lime. A similar method was to be adopted in case of combinations or exactions by workmen.

All questions as to placing or stopping up ancient lights, watercourses, gutters, &c., were to be referred to the arbitration of the Alderman. Sewers, vaults, and paving of streets were to be dealt with by Commissioners, who were empowered to levy a special tax for the purpose.

The clauses of this Act dealing with street widening and improvement are instructive. The streets as a general rule were to be 24 feet wide,* and the Act of 1670 states that many builders

* 24 feet was the statutory width for Common Highways under the Act of 1662 (14 Charles II., cap. 6).

advanced their foundations further than formerly to secure regularity for the new streets. Payment was to be made for land taken, the price to be assessed by a jury. A "betterment" clause also existed giving power to charge the owners of houses improved by the opening out of streets.

In connection with these improvements Thames Street was to be raised 3 feet at least. The most important of all, though, was the reserving of a strip of open land 40 feet wide along the whole river front from the Tower to the Temple, possibly at the suggestion of Sir Christopher Wren, and a similar strip along the Fleet River, 70 feet from the middle of the stream (afterwards altered to a total width of not less than 100 feet and not more than 120 feet).

A duty on coals was also to be levied for the purpose of making wharfs and quays on the north side of the Thames and on each side of the Fleet River. The amount was, however, found insufficient and this duty was considerably increased by the succeeding Act.

The additional Act for the rebuilding of the City of London (1670) (22 Charles II. cap. 11) dealt first of all with further street improvements that had been found necessary in the four years during which the rebuilding of the city had been proceeding. Ground was to be assigned for markets and public buildings, such as the Royal Exchange, Guildhall, and Sessions House, enlarged and in some cases separated from other buildings in order to afford additional security.

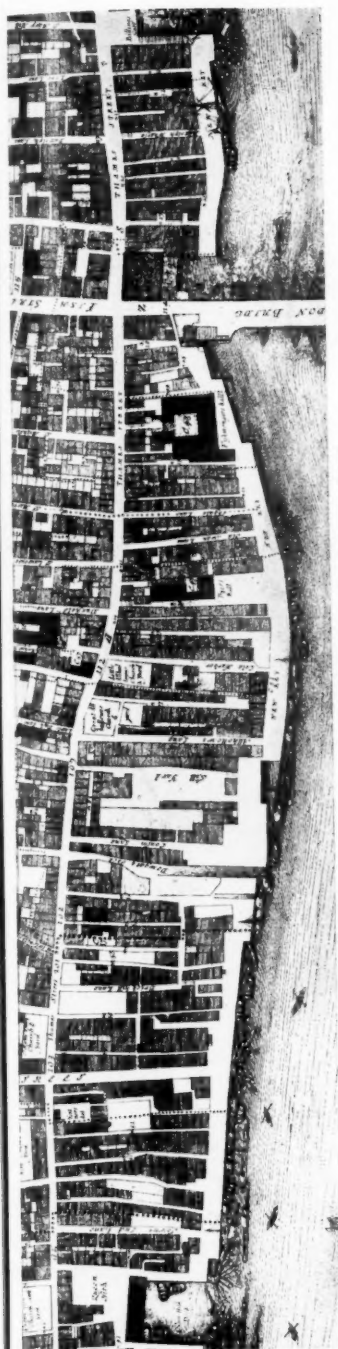
A number of knotty legal points as to ownership and so on were to be settled by the decision of any three Judges, and differences as to party walls or charges of building were to be determined by the City Surveyors or any two of them (or, on appeal, by the Lord Mayor and Court of Aldermen). It was now made compulsory to carry off roof water by means of pipes. Storey posts were by this Act specifically left to the discretionary power of the surveyor, "such corner posts or storey posts to be of oak and of such dimensions and scantlings as the surveyors of the said City shall direct and appoint." The present powers of District Surveyors in this respect have therefore existed for nearly 250 years.

RIVERSIDE QUAYS AND SUBSEQUENT ENCROACHMENTS.

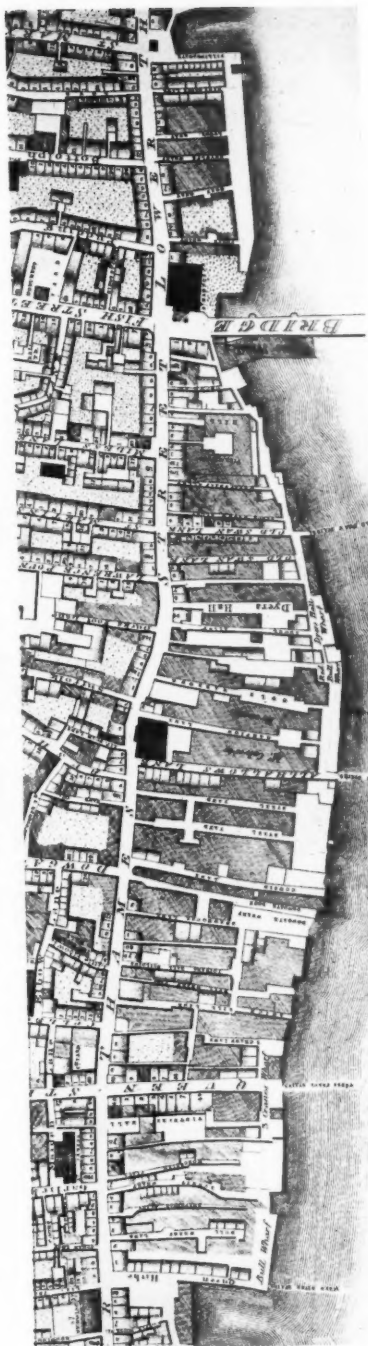
This additional Act (1670) confirmed the provision of a continued tract of ground 40 feet wide from London Bridge to the Temple for the purpose of the new quay, and, contrary to the usual impression, there can be no doubt that such a quay was actually provided and that it existed for nearly 150 years. This Act does not include the length from London Bridge to the Tower, which appears to have been already constructed.

Ogilby's map of 1677 shows the "New Key" as completed, and we can trace it successively in all the maps for the next hundred years or so. Horwood's map of 1799 shows the commencement of obstructions such as crane houses and sheds; the map of 1813 shows the encroachments growing still further; and by 1821, many brick buildings having been erected, it became necessary to whitewash the offenders, and, in spite of considerable opposition, a short Act was passed repealing in part the beneficent provisions of a century and a half earlier. Many causes, no doubt, contributed to the loss of these magnificent public quays, the introduction of docks lower down the river being not the least important. The original line of quays can still be traced by reference to the Ordnance map.

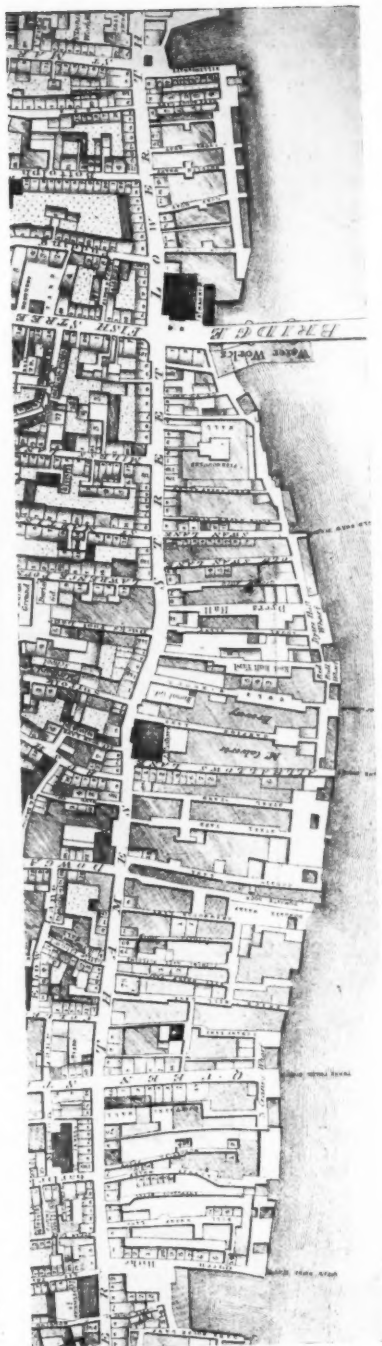
In the evidence given before a Select Committee of the House of Commons, appointed in 1833, on the necessity for public walks, &c., it is stated that gradual encroachments had been made on the rights of way once possessed by the public on both banks, particularly on an actual space on the north side of the Thames which was granted by Parliament and placed at the disposal of Sir Christopher Wren for the erection of a public walk. Gradual encroachments, first by cranes, then by sheds and counting-houses, had "at last got up into brick buildings and the citizens of London deprived of all that splendid intention." (Report of Select Committee 1833, p. 31). From a discussion at the R.I.B.A. in 1859 (Vol. IX., p. 90), it appears that the Act of 1821 had not disposed of the public right of way along the quays, which although encroached upon was still existing.



From Ogilby's Map of 1677, showing "New Key" as completed.



From Horwood's Map of 1789, showing commencement of encroachment on Quay.



From Horwood's Map of 1813, showing further encroachments by crane houses, &c.
RIVERSIDE QUAYS AND SUBSEQUENT ENCROACHMENTS.

STREETS TO BE SWEEPED AND LIGHTED.

During the reign of William and Mary the condition of the streets received some attention, and everybody within the London area was required to have the street in front of his house swept twice a week (8 & 9 William III., cap. 37), under a penalty of 10s. Everybody in London and Westminster was also required to do his share of street lighting by hanging out a lantern.

QUEEN ANNE—1707–1708.

Fires still continued frequent, and further attempts at fire prevention were felt to be useless without proper appliances. In the reign of Queen Anne two Acts (6 Anne, cap. 58 [1707] and 7 Anne, cap. 17 [1708]) were passed, making it compulsory on each parish to provide two fire engines—viz., one



QUEEN ANNE'S GATE, S.W. (1705).

From Richardson and Gill's *London Houses from 1660 to 1820*. (Batsford, 1911.)

large engine and also a hand engine, and the prompt attendance of the fire engines was secured by offering rewards of 30s., 20s., and 10s. for the first, second, and third parish engines to reach the scene of a fire, "provided they arrived complete and in good order."

Marks were now to be fixed on houses to indicate the position of stopcocks, and the key of the stopcock left at the nearest house, all these duties being undertaken by the churchwardens, who must have had no light task. As an encouragement to the watermen employed by the fire insurance offices, not more than thirty for each office were allowed freedom from impressment for the Navy and the Army. Any servant or similar employee whose carelessness or negligence caused a fire was liable to forfeit £100 to be distributed amongst the sufferers from the fire, "or eighteen months' hard labour in some workhouse," the owner or occupier no longer being liable.

Party walls were required by the Act of 1708 to be of the following thickness, somewhat simplifying the code previously in force:

2 bricks thick in cellar (half on each man's ground);

1½ bricks thick up to garret floor;

1 brick thick in gable ends (under penalty of £50).

Party walls were to be carried up 18 inches above the roof. Front and rear parapets to be 2 feet 6 inches above the garret floor and coped with stone or brick (1707 Act). This is the first introduction of the idea of carrying the party wall above the roof, which has been one of the bugbears of architects ever since.

No "Mundillion or cornish of timber" or wood was in future to be allowed under the eaves.



No. 60 CAREY STREET (1720)

From Richardson and Gill's *London Houses from 1660 to 1820*. (Batsford, 1911.)

For the first time a right was given to the building owner to pull down and rebuild a party wall, charging the adjoining owner at the rate of £5 per rod.

Chimney jambs and chimney backs were to be 9 inches thick and widths 4½ inches, all flues parged and 9 inch gables rendered inside, hearths and chimney openings to be arched with brick.

No timber within 5 inches of flue.

No stoves, &c., to be within 9 inches of adjoining house.

No brick or stonework in future to rest on timber of any sort except the foundation planking usual in marshy ground.

Dangerous trades, such as turpentine distilling, were to be at least 50 feet away from any other building (the distance laid down in the present-day Act has therefore lasted over 200 years). An important point, too, is the setting back of all door frames and window frames in all houses, which were now for the first time to be set in reveals 4 inches deep—not for a protection from fire, but as a shelter from the weather. The common use of reveals, therefore, dates from 1st June 1709, and this, together

with the party wall above the roof and the absence of wooden modillions, should afford a very valuable clue to the date of the building. Unfortunately, however, instances of contravention of the Act are still to be found.

Under an Act of 1710 (9 Anne, cap. 17) fifty new churches were to be erected out of the proceeds of extra coal duties. The work of building St. Paul's was now nearing completion, and the Surveyor-General of St. Paul's (the great Sir Christopher) was by this Act to receive his "suspended salary." The authorities had apparently kept half of his salary back till he had finished the work.

GEORGIAN PERIOD.

We come now to the period of the early Georges. Discontent and dissatisfaction seem to have been felt by many with the previous Act of Queen Anne's reign, and an attempt was made to set things right. In 1724 a new Building Act (11 Geo. I., cap. 28) came in which introduced the necessity for notice to be given to the adjoining owner in cases where it was desired to rebuild a party wall in connection with any new building. Three months' notice, though, was required, not the modern compromise of two months, and brickwork was to be paid for at £5 per rod. No timber was to be allowed in party walls. Party-wall openings uniting buildings were only allowed so long as the premises were used as one house only, and provision was made for party pipes to take off water from roofs.

The Act goes on to show us what was wrong with the Act of Queen Anne. "A very great increase of buildings" had taken place and many of the houses so built were admittedly not in accordance with the Act. The owners and head builders were accordingly liable to the heavy statutory penalty of £50, but there was no means of making them put the work right. There was no help but to excuse them the penalty, provided they altered their buildings to comply with the Act.

WINDOW TAX.

Windows were first taxed in this country by 6 & 7 Wm. III., cap. 18 (1695). The duty was increased by 20 Geo. II., cap. 3 (1746), amended by 21 Geo. II., cap. 10 (1748), and further increased by the Tea Commutation Act, 24 Geo. III., Sess. 2, cap. 38 (1784). It was again raised by 37 Geo. III., cap. 105 (1797), by 42 Geo. III., cap. 34 (1802), by 48 Geo. III., cap. 55 (1808). It was reduced by 4 Geo. IV., cap. 11 (1823), and was repealed 14 & 15 Vict., cap. 36 (1851).

Typical examples of the Window Tax at different dates are given below:

| IN 1762. | | | | | IN 1833. | | | | |
|-----------|-----|-----|-----|---------|-----------|-----|-----|-----|---------|
| 8 windows | ... | ... | ... | £0 11 0 | 8 windows | ... | ... | ... | £0 16 6 |
| 9 " | ... | ... | ... | 0 12 0 | 9 " | ... | ... | ... | 1 1 0 |
| 10 " | ... | ... | ... | 0 13 0 | 10 " | ... | ... | ... | 1 8 0 |
| 11 " | ... | ... | ... | 0 14 0 | 11 " | ... | ... | ... | 1 16 3 |
| 12 " | ... | ... | ... | 1 1 0 | 12 " | ... | ... | ... | 2 4 9 |
| 13 " | ... | ... | ... | 1 2 6 | 13 " | ... | ... | ... | 2 13 3 |
| 14 " | ... | ... | ... | 1 4 0 | 14 " | ... | ... | ... | 3 1 9 |
| 15 " | ... | ... | ... | 1 5 6 | 15 " | ... | ... | ... | 3 10 0 |
| 16 " | ... | ... | ... | 1 7 0 | 16 " | ... | ... | ... | 3 18 6 |
| 17 " | ... | ... | ... | 1 8 6 | 17 " | ... | ... | ... | 4 7 0 |
| 18 " | ... | ... | ... | 1 10 0 | 18 " | ... | ... | ... | 4 15 3 |
| 19 " | ... | ... | ... | 1 11 6 | 19 " | ... | ... | ... | 5 3 9 |

20 and upwards the same as before—viz., 1s. 6d. per window and 3s. the house.

All houses or cottages with 7 or less windows to pay 3s. the house. As many persons have, and will alter the number of their windows on account of the additional duty, it may not be improper for them to know that the Act of Parliament directs that no window or light will be deemed to be stopped up unless it be stopped with brick or stone or plaster upon lath, or with the same materials of which the outside of the house doth chiefly consist, and the Surveyors in their respective divisions have express orders from the Board of Taxes to charge all windows that are not stopped up according to the directions of the Act. (*Annual Register*, 1762, p. 70.)

TAX ON BRICKS.

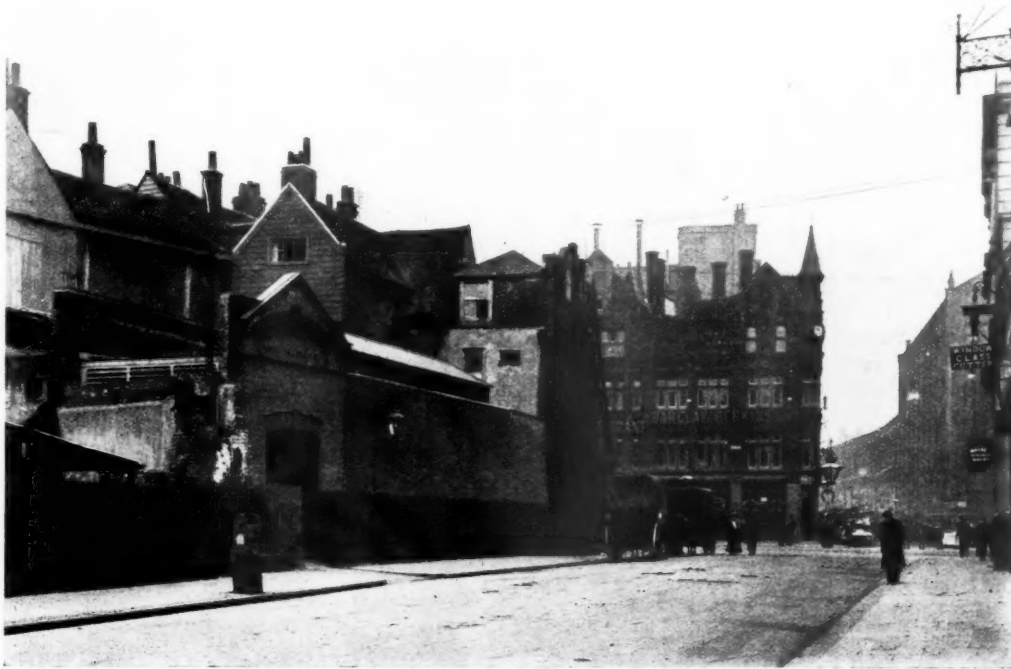
Bricks were first taxed by 24 Geo. III., cap. 24 (1784), at the rate of 2s. 6d. per 1,000. This duty was several times increased, until by 2 & 3 Vict., cap. 24 (1839), it was fixed at 5s. 10d. per 1,000 for ordinary sized bricks, and 10s. for the larger size. It was repealed in 1850 (13 & 14 Vict., cap. 9).

LAWS AS TO BRICK AND TILE MAKING AND SIZE OF BRICKS.

In the time of Edward IV. (17 Ed. IV., cap. 4) directions were given for the proper making of plain tiles, roof tiles, and gutter tiles.

The Tilers and Bricklayers Company, incorporated in the reign of Queen Elizabeth, had been given power to supervise brick and tile making within 15 miles of the city of London, but in spite of this it was found necessary in 1725 (12 Geo. I., cap. 35) to again legislate on the subject :

"Notwithstanding the Act of Parliament, several persons, especially within the compass of 15 miles of the city of London, dig the clay and earth for making bricks at unseasonable times in the year, and continue to make bricks of bad stuff and unsizeable dimensions, and do not well burn the same, and in making thereof mix great quantities of soil called Spanish, and in burning thereof use small ashes and cynders commonly called breeze instead of coals, and burn the bricks commonly called grey stock bricks in clamps and the bricks commonly called place bricks in the same clamps, on the



BACK OF HOUSES, ALDGATE HIGH STREET (FROM MANSELL STREET).

outside of the said grey stock bricks by means whereof great part of the bricks now usually made are so hollow and unsound that they will scarce bear their own weight, and whereas there is at present no provision made by any law for the dimensions of bricks to be made and used in buildings, or for the lengths, breadths, or thicknesses of pantiles, which are but a late invention in England . . . in future all place bricks to be not less than 9 inches by $4\frac{1}{2}$ inches by $2\frac{1}{2}$ inches. Stock bricks to be of same dimensions, but $\frac{1}{2}$ inch thicker; pantiles not less than $13\frac{1}{2}$ inches long, $9\frac{1}{2}$ inches wide, and $\frac{1}{2}$ inch thick."

In 1730 it was found necessary to forbid combinations of manufacturers to advance the price of these materials, and in 1769 the statutory size of bricks within 15 miles of London was reduced to $8\frac{1}{2}$ inches by 4 inches by $2\frac{1}{2}$ inches—another clue to the date in buildings of this period.

STREET SIGNS.

The Spectator of 2nd April 1710-11 (No. 28) has an interesting letter on the subject of street signs, in which the writer draws attention to the "daily absurdities hung out upon the signposts of this city." He goes on to say :

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"Our streets are filled with blue boars, black swans, and red lions, not to mention flying pigs and hogs in armour, with many other creatures more extraordinary than any in the deserts of Afric. Then the way they are joined together in the same sign. The Fox and Goose may be supposed to have met, but when did the Lamb and Dolphin ever meet, except upon a signpost? It must, however, be observed that it is usual for a young tradesman to add to his own sign that of the master whom he served, and this seems to have given rise to many of these absurdities which are committed over our head."

Despite this ridicule, street signs held their own as a means of identifying premises well into the middle of the eighteenth century. A note in the *Annual Register*, dated 12th July 1765, reads:

"The new pavement from Charing Cross to Temple Bar was this day ended and the communication opened for carriages. Those who have not seen this new pavement can scarcely imagine the alteration made by it, the taking down of signs and fixing up of lights in a regular manner. It may be said that no street in London, paved, lighted, and filled with signs in the old way, ever made so agreeable an appearance, but the alteration in St. James Street greatly surpasses it."

Street Numbering was first introduced early in the eighteenth century; the first known instance

being in Prescott Street, Whitechapel, which is mentioned by Hatton in 1708 as having the houses distinguished by numbers instead of signs. One or two other streets were either partially or wholly numbered in the first half of that century, but this did not become popular until after the Act of 1762 (3 Geo. III., cap. 23), which required the removal from the streets in the West End of hanging signs, and for the fixing of them on the fronts of the houses to which they belonged. In 1765 (6 Geo. III., cap. 26) power was given to the Commissioners of Sewers in the City to regulate projecting signs, and the same Act also made provision for the names of streets to be put up and all houses numbered (within the City of London). Street lighting was undertaken by the Commissioners in 1767. Towards the end of the century the numbering of houses had become general, and many of the older streets, especially in the City and West End, still retain substantially the numbering then applied to them, the system of



BARTON STREET, WESTMINSTER.

From Richardson and Gill's *London Houses from 1660 to 1820*. (Batsford, 1911.)

"consecutive" numbering being used, as opposed to the "odd and even" principle of the present day. *Street Naming* was not apparently controlled until 1855, when the Metropolitan Board of Works was empowered to deal with the matter under the Metropolitan Management Act. Not before it was needed, however, for in 1868 there were no fewer than 40 High Streets, 50 George Streets, and 65 Charles Streets within the area of London.

The following extracts from the *Annual Register* give interesting sidelights on the London of 150 years ago :

1760, p. 161.—“A great many hogs were lately seized by the Churchwardens, overseers, and constables of the parish of St. George, Hanover Square, and sold for the benefit of the poor, agreeable to the 8th and 9th of William III., which makes all hogs forfeited that are bred, fed, or kept in the houses or backsides of the paved streets or within 50 yards of the same, where the houses are contiguous.”

1762, p. 90.—“A remarkable cause came on in the Court of King's Bench upon indictments against an eminent builder and a master bricklayer employed by him, for a nuisance in leaving a heap of rubbish in the street last October, no watch or light being set up in order to prevent accidents; the consequence of which was that a coach with some ladies and children in it was overturned, most of whom were greatly bruised but one of the ladies received her death. The builder alleged that he committed the care of removing this rubbish to the bricklayer, whose proper province it was to see it done; and the bricklayer laid the blame on the carter. But the builder was considered as culpable, it being his business not only to take care to employ proper people under him, but also to see that they do their duty, and he was therefore fined £100, which he paid in Court; and the bricklayer's sentence was twelve months' imprisonment in the King's Bench.”

The following catastrophes from fire and tempest are recorded as happening in an average six months :

1763, 6th May.—“A most dreadful fire occurred at the house of Lady Molesworth in Upper Brook Street. 9 perished.”

31st May.—“Some old houses in Bunhill Row fell down lately, by which accident several persons lost their lives.

“A little before 3 others fell down in White Friars, and a poor child accidentally going by to school was buried under the ruins.”

23rd June.—“A fire broke out in Kings Street, Rotherhithe, which entirely consumed about 20 houses and several outhouses, besides damaging many other buildings.”

10th July.—“About 1 o'clock in the morning a most dreadful fire broke out near New Crane Stairs, Shadwell, which in a few hours consumed 114 houses besides warehouses, etc., a dock, and a ship just finished therein. Several lives were lost on this occasion. But no less than £600 was soon after collected for the relief of the sufferers.”

2nd July.—“A house in Queen Street, Lincoln Inn Fields, which had been lately repaired, and 2 in Gracechurch Street, which showed no signs of craziness, suddenly tumbled to the ground, without any other noise than a loud crack, which, however, was sufficient to alarm the inhabitants, so that no lives were lost.”

8th Sept.—“A most dreadful fire broke out at Shadwell dock, which burnt 30 houses before it could be extinguished, among which was Stockers brewhouse and divers others of great value. Fifteen hundred pounds has since been collected for the unhappy sufferers by this fire. We cannot help observing on this occasion how many lives might be saved in case of sudden fire had every floor a front and a back door-window [i.e., casement window], as then those who could not get downstairs might much better come at ladders fixed to receive them, and throw out beds and jump out with a much greater certainty of falling upon them than can be done by means of mere windows.”

12th Nov.—“The Blue Anchor, a public house near the King's Yard, Deptford, known by the name of the Red House, fell entirely to the ground; there were several lodgers in it, two of whom were unfortunately killed; divers were dug out of the ruins much bruised, and three children, who happily received no hurt.

“Two days before two old houses and a new house fell down of themselves in London, but fortunately without doing any mischief.”

27th Dec.—“The wind was so high that a house in St. Giles was blown down and a woman and two children killed.”

1764, p. 82.—“A small piece of ground in Piccadilly, bought some years ago, when a field, for £30 by a brewer, as a waste place to put his butts in, was lately sold for the benefit of his son, an orphan, for the sum of £2,500, so greatly is that part of the town improved, even in the memory of man.”

Here is another typical six months :—

1765, p. 59. 19th Jan.—“During a very crowded trial at the Guildhall, the floor gave way, but was providentially prevented from falling entirely down by some goods which were stowed in the cellar underneath it, so that no person received any other hurt than that of being greatly frightened.

“The like happened some years ago at the Neapolitan Ambassador's Chapel, near Soho Square, when one side of the floor fell quite to the ground, though without the loss of any lives.

“And had like to have happened since at a public meeting of the Society of Arts, etc., in the Strand (May, 1762).

“We think it our duty to mention these facts, to caution people against meeting in great numbers in places not originally intended to bear very great weights, or not duly surveyed before the conversion of them to such uses.”

15th May.—“A dreadful fire broke out in Narrow Street, Shadwell, which consumed upwards of 60 houses.”

31st May.—“Five houses in Hat and Mitre Court in St. John's Street, Smithfield, lately fell; and a few days after 2 houses fell down entirely to the ground, but no person was hurt, in George Alley, near Fleet Market.

“We think it our duty to mention these accidents, in hopes of awakening the attention of those whose duty it is to remove such nuisances.”

1st June.—“A dreadful fire broke out adjoining Rotherhithe Church, which in a few hours consumed 206 houses. Upwards of £3,000 was collected for the sufferers.”

13th June.—“Fire in Talbot Inn, Surrey Street, Strand, burnt all the houses between it and Somerset House and Surrey Street to Strand Lane.”

21st June—"Fire at Gun-Dock, Wapping, destroyed 30 dwelling houses."

31st July—"The rage, or at least hurry, of building is so great at present that the bricks are often brought to the brick-layers before they are cold enough to be handled, so that some days ago the floor of a cart loaded with bricks took fire in Golden Lane, Old Street, and was consumed before the bricks could be unloaded."

25th Aug.—"Fire at Ratcliff Cross, 30 houses, and at Theobald's Court, Strand."

10th Sept.—"Fire near Sadler's Hall, Cheapside—many houses burnt."

7th Nov.—"A most dreadful fire, Bishopsgate, along Cornhill and Leadenhall Street, Threadneedle Street, White Lion Court, etc., destroyed upwards of 100 houses, worse than in 1748."

FIRE INSURANCE, DANGEROUS STRUCTURES, AND CITY IMPROVEMENTS.

By the Act of 1765 (6 Geo. III., cap. 27) the fire insurance companies were given power, if necessary, to rebuild premises destroyed by fire. From the much greater risk incurred it might be expected that the premiums were high, but it is found that the premium charged by the Sun Fire Office was only 2s. 6d. per cent., as compared with the average price of 1s. 6d. per cent. current at the present day.

The Building Act of 1760 (33 Geo. II., cap. 30) was primarily to permit various street improvements (on the lines of the later Michael Angelo Taylor's Act), the new streets being mainly 50 feet wide, though 40 feet and 20 feet passages are also mentioned. By this time it had been found that the Act of 1725 as to rebuilding party walls was in itself defective, and applied only to cases where one of the houses was to be newly erected or rebuilt. It had also been found that the jury of workmen were frequently equally divided in opinion; power was accordingly given to the Lord Mayor to appoint one more workman to solve the *impasse*.

Party walls were in future to be a little thicker than under Queen Anne—viz., $2\frac{1}{2}$ bricks thick in cellar and two bricks thick above. Timbers in party walls were to be 9 inches distant from each other, and the general price of brickwork had now increased to £7 per rod.

This is the first Act dealing with *dangerous or ruinous structures*, and is very much on present-day lines. The procedure was for the Court of Commissioners to order such structures to be hoarded round, and to give notice to the owner to "take down or repair forthwith," and in default the Court might do the work and charge the owner or the future occupier.

The Schedule of Street Improvements attached to this Act is a very comprehensive one, and shows that so long ago as 1760 people were considering facilities for City traffic. No less than 34 separate improvements are scheduled. There appear to have been some disputes as to the powers of the Corporation Improvements Committee, for five years later, in 1765 (6 Geo. III., cap. 27), an explanatory Act was necessary. We can well understand this when we find in the original Act such generalities as the following: "To pull down the tin shop and the trunk maker's house at the south-west corner of Cheapside, leading into St. Paul's Churchyard, and to lay the ground into the street."

THE "NEW ROAD."

"The New Road (Euston Road, &c.), 1756 (29 Geo. II., cap. 88).—To enable the respective trustees of the turnpike roads leading to Highgate Gatehouse and Hampstead and from Saint Giles Pound to Kilbourn Bridge, in the County of Middlesex, to make a new road from the Great Northern Road at Islington, to the Edgware Road near Paddington, and also from the north end of Portland Street cross the Farthing Pye House Fields into the said new road, and for enlarging the terms and powers granted by two several Acts for repairing the said road from Saint Giles Pound to Kilbourn Bridge."

So runs the brief description of the greatest and most farsighted piece of street planning in the middle eighteenth century. The New Road from Paddington to Islington which, as the Euston Road, Marylebone Road, and Pentonville Road, now forms so vital a metropolitan thoroughfare, was laid out in open fields a mile or more away from the built-up area, but with a width of 150 feet between the buildings. With this example of our great-grandfathers before us, why do we so often take a limited view of the future, when London shall be vaster by far than the London we now know?

The laying out of the great "New Road" was not the only evidence of foresight in the direction of wide roads sufficient for the future needs of the metropolis. The general Turnpike Acts, so long ago as 1773, provided for turnpike roads to be at least 60 feet wide, and no encroachment in the way of hedges or ditches was allowed within a distance of 30 feet from the centre of any turnpike road.

PUBLIC IMPROVEMENTS.

The early years of George III. were remarkable for the thirst for public improvements in London; indeed, there are many suggestions to be found in these projects which might well be taken to heart both by the Institute and the newly formed London Society.

One of the most complete and carefully thought-out schemes for London improvement is to be found in a book by John Gwynn, published in 1766 under the title of *London and Westminster Improved*, illustrated by Plans, to which is prefixed a discourse on Publick Magnificence. Gwynn was the architect of the well-known English bridge at Shrewsbury and a friend of Dr. Johnson. As an architect, he was a keen advocate of a complete town plan for the already overbuilt capital, and in his opening remarks he says: "The rage of building has been carried to so great a height for several years past as to have increased this metropolis in an astonishing manner. For want of such a publick direction, those very buildings which might have been easily rendered its greatest ornament are a melancholy proof of the necessity of adopting a well regulated plan," and even at this late period he hopes it will be possible to do something. He feels, however, that "if these hints or those of others on the same subject are not timely attended to, that publick negligence will unavoidably produce publick deformity, and publick deformity must certainly produce publick disgrace." His first proposal is that the new road from Paddington to Islington shall be considered as the great boundary or line for restraining and limiting the rage of building, and that Hyde Park shall constitute the ultimate western boundary beyond which no building shall be permitted on any pretence whatever.

In France the same idea was current, for we find from the *Annual Register*, 1765 (p. 113):

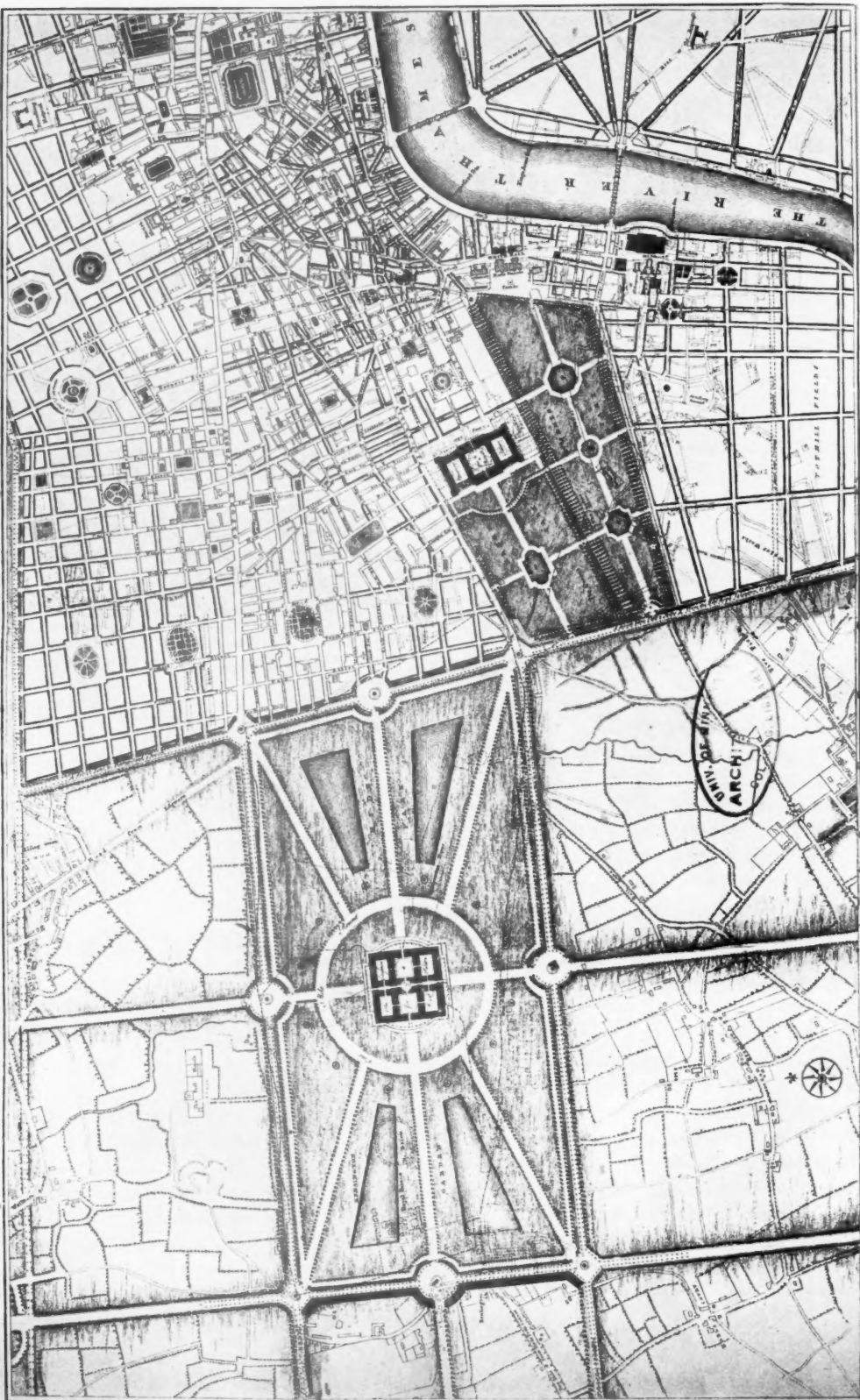
"The King of France has already forbid the erecting any additional buildings at the ends next the country of the streets belonging to the suburbs of Paris, upon any pretext whatsoever, either upon the ground belonging to the city, or the parish adjoining: and likewise the opening of any new streets in the said suburbs; and directs that the streets now in being which are less than 30 feet wide shall be extended to that width, whenever the proprietors shall rebuild their houses."

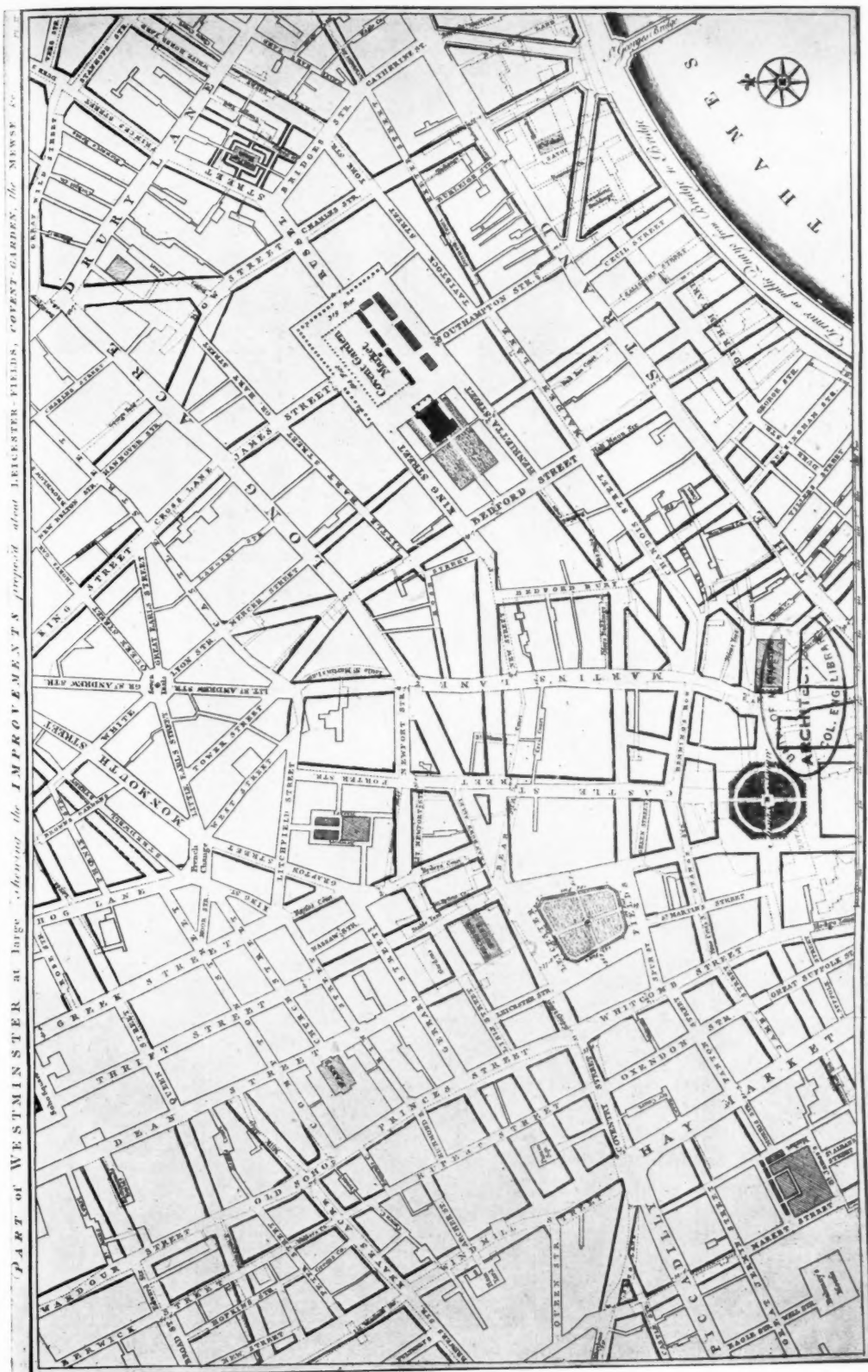
Even at that date, however (1766), the intention of the judicious clause requiring buildings to be set back at least 50 feet from this new road (Euston Road) was being defeated by the erection of high garden walls within that distance, and Gwynn especially notes the mean appearance of the "back fronts" everywhere visible.

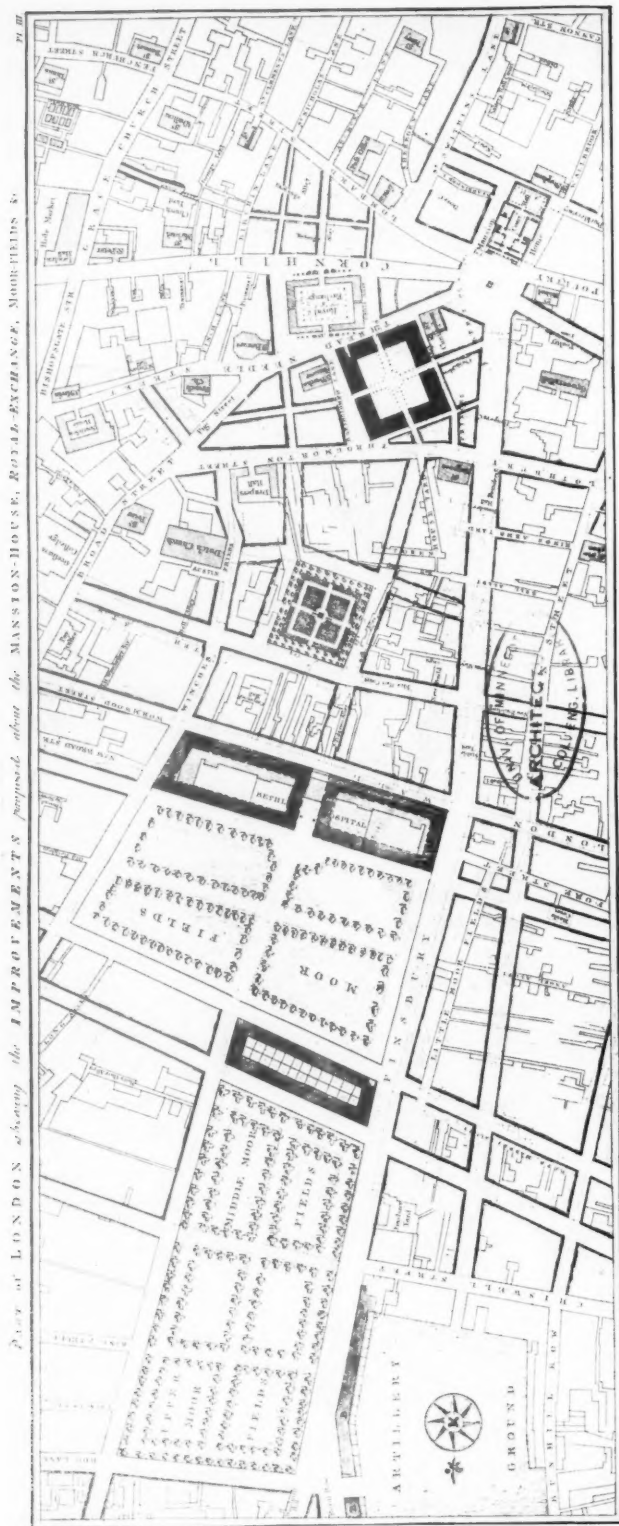
One or two illustrations of Gwynn's proposals will serve to show that nearly all the important improvements that have since been effected were foreshadowed by him: The Thames Embankment (but from Westminster to the Tower); Waterloo Bridge; Parliament Square; the Processional Way and entrance to Charing Cross; a public square at the west of St. Martin's Church where now stands Trafalgar Square; new streets between Holborn and the Strand; New Oxford Street, Moorgate Street, and many others, are all shown on Gwynn's plan a century or so before they were actually executed. This should give encouragement to the bold dreamers of the present day who can look forward with the eye of the seer to a London of the future, compared with which the present London is but a *faubourg*.

Gwynn, with his modern up-to-dateness, looked to the future of the south side of the river, in his days known as "St. George's-Fields," which he describes as "the only spot now left about London which has not yet fallen a sacrifice to the depraved taste of modern builders." He, too, voices the old lament, "notwithstanding the amazing encrease of buildings, houses are still procured with difficulty and the rents of most are perpetually encreasing." This, too, sounds refreshingly modern: "There is one circumstance which is pleasant enough and is now carrying on with great success by the landlords, in those streets which are at this time new paving, which is, that although the expense of paving and lighting the streets in the manner prescribed by the Act falls entirely upon the tenant, yet the landlords taking advantage of a benefit they never intended or have in the least contributed to, fail not wherever they are not prevented by a lease to raise their rents in the most arbitrary manner." It is also interesting to hear an architect of the eighteenth century complaining that architectural work was

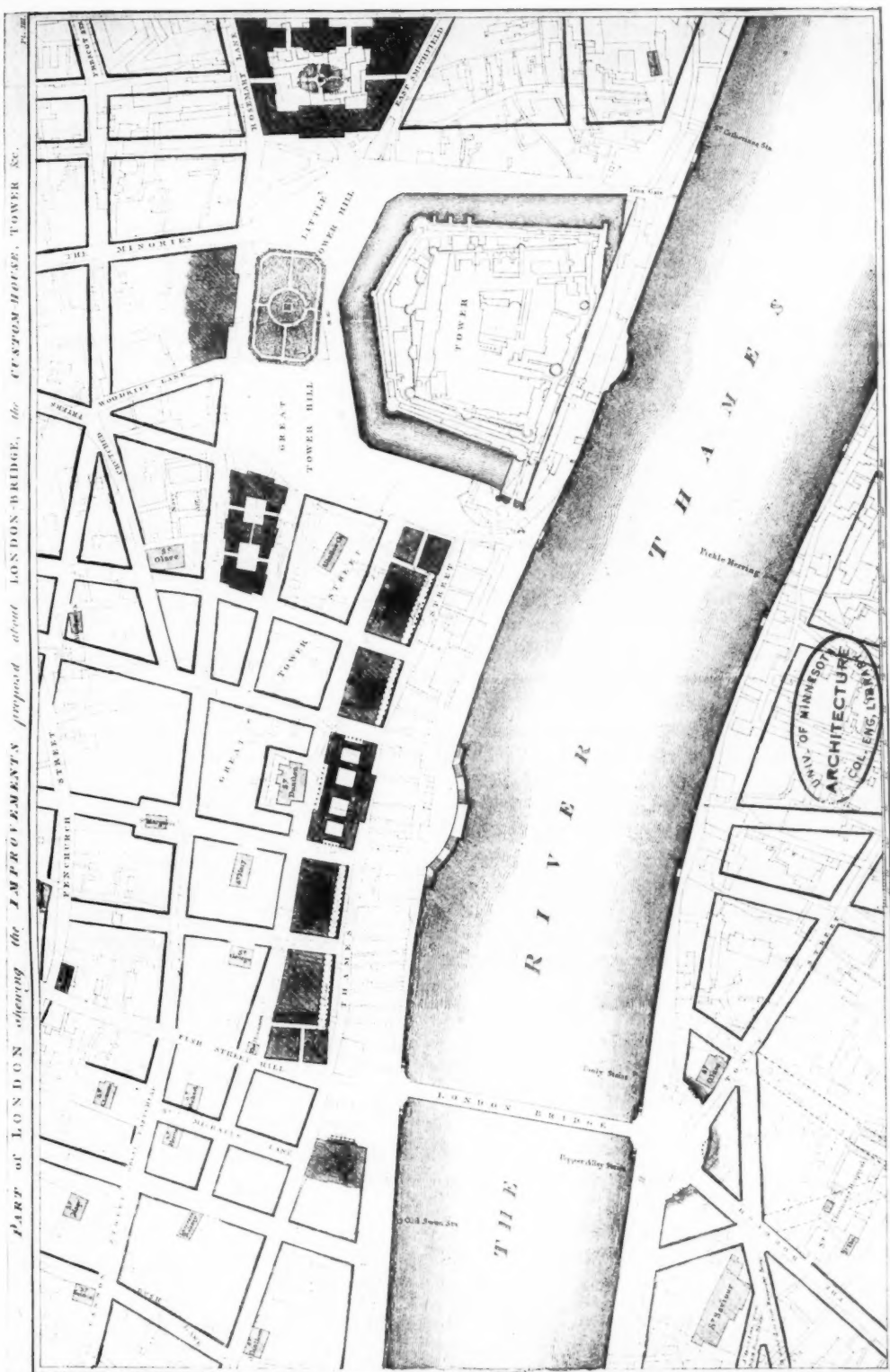
A PLAN of HYDE PARK with the CITY and LIBERTIES of WESTMINSTER &c. shewing the several IMPROVEMENTS proposed.







JOHN GWYNN'S PROPOSALS—1766.



JOHN GWYNN'S PROPOSALS—1766.

sometimes given to upholsterers and furnishing firms, and even "artistic copyright" is touched upon. Suggestions occur as to sewers and subways to avoid breaking up the streets, ordnance survey maps are proposed, and so on.

A Paper read at this Institute sixty years ago* (1854) pays a well-deserved tribute to Gwynn's admirable work, *London and Westminster Improved*, which for nearly a century had then been "a guide and a text book at Whitehall as well as at Guildhall." Many of his suggestions had been adopted, and in every case with complete success.

There were many others who thought with Gwynn. T. Malton, famous for his engravings, wrote in 1792:

"It is greatly to be regretted that all public improvements are not subject to some legal control that, without materially affecting the rights of individuals, might prevent them from disgracing their country with meanness and absurdity."

The approach to London from the Kentish Road, by which travellers from the Continent usually enter the metropolis, was, within these few years, highly picturesque and striking. The spacious area of St. George's Fields, intersected by roads, by night with its many long rows of lamps, exhibited all the splendour of a festive illumination."

In considering the schemes for the improvement of London we must not forget the work of George Dance, who did so much for the improvement of the City of London. His proposals in 1796 for a double bridge to replace the then existing London Bridge, and also for the general improvement of the Port of London, are noteworthy as showing a foresight far in advance of his time.

THE RIVER THAMES AND ITS EMBANKMENTS.

The guardianship of the River Thames has until recent years been almost a special prerogative of the City. As early as the reign of Henry VII. an Act was passed giving to the Mayor of London the rule of the River Thames from Staines to Yenlade and Medway. The City Fathers have always been very jealous of this prerogative, and many have been the recurring struggles to resist encroachment from the projection of wharves and embankments into the river.

The brothers Adam in their great building scheme for the Adelphi appear to have been offenders in this respect. In September 1770, a Committee of Inspection appointed by the Court of Common Council to view the new embankment at what was then called Durham Yard reported that "the buildings erected by Messrs. Adam project into the river 28 feet, and that their further encroachments by earth and rubbish project into the river 175 feet in depth and 397 feet in length."

The Watermen's Company and others made serious complaints about these obstructions in the river, and all such encroachments, although subsequently sanctioned by the Corporation, were very closely watched. During a period of 70 or 80 years there were at least ten such embankments constructed at considerable expense, all of which were swept away by the great Thames Embankment Scheme, which came to final fruition in 1870. The south side embankment, foretold by Gwynn 150 years ago, has yet to be put in hand, but it will have to be done.

FURTHER CONSTRUCTIONAL REQUIREMENTS.

Suburban villas, highwayside retreats
That dread th' encroachment of our growing streets;
Tight boxes, neatly sashed, and in a blaze
With all a July's sun's collected rays,
Delight the citizen who, gasping there,
Breathes clouds of dust, and calls it country air.—COWPER.

The Building Act of 1764 (4 Geo. III., cap. 14) made it definitely clear that party walls, if defective or out of perpendicular, could be treated as dangerous structures, although neither of the adjoining houses might require to be rebuilt, and the price of brickwork was reduced to £6 10s. per rod. In addition to the party walls the back and forefronts of all future buildings were to be of stone or good brick from the breastsummer upwards; no timbers, except binders or purlins, were allowed in party walls, and, in any case, there were to be 9 inches of solid brickwork between. No timber was allowed

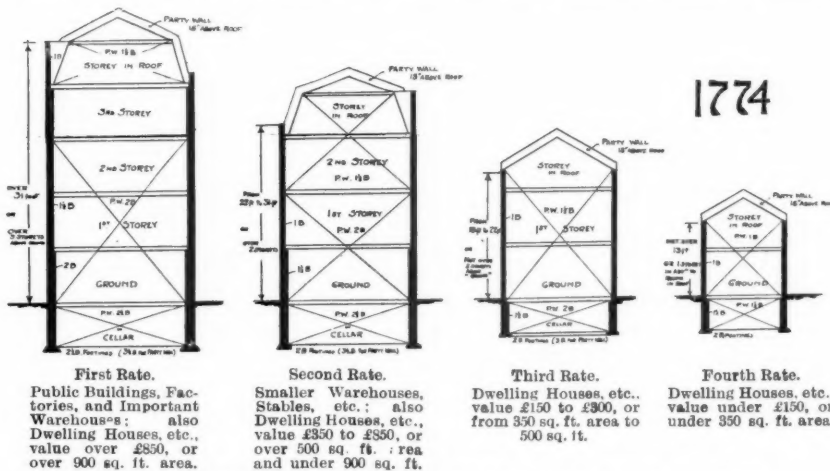
* "Open Spaces of the Metropolis." S. Angell, TRANSACTIONS R.I.B.A., 1854.

under any hearth or within 9 inches of a flue. The Justices were by this time becoming a power in the land, and the Lord Mayor appears to have relinquished his previous powers, possibly as a result of the feud between the Crown and the City which marked the early years of George III.

A very important clause of this Act laid down that after the 1st July 1764, "every master builder who shall erect or build any house shall *within 14 days after it is covered in*, cause the same to be surveyed by one or more surveyors, who are to make oath before a Justice of the Peace that the same has been built and erected agreeable to the Act."

It is curious that this Act repeats the error of Queen Anne's Act of 57 years earlier by imposing a penalty for every offence of £50, but not providing for enforcement of the actual requirements. One-half of the penalty went to the informer and one-half to the poor of the parish.

There were two Building Acts passed in 1765 (6 Geo. III., cap. 27 & 37), from both of which it appears that the enforcement of the Act in those days was more troublesome than at present. The carefully drawn sections of preceding Acts giving a right to repair a defective party wall had forgotten to include a *compulsory right of entry* for the builder, and this was now included, though a somewhat similar



Fifth Rate.—Detached Buildings, 4 ft. to 8 ft. from road and 16 ft. to 30 ft. from adjoining building.
Sixth Rate.—Detached Buildings, 8 ft. from street and 30 ft. from adjoining building.
Seventh Rate.—Cranehouses, Windmills, etc., also Tanners' Workshops, etc.

power existed 40 years earlier. It was also once again discovered that a £50 penalty could not put irregularities right, and once again, word for word, the Act of 1765 repeats the penitential confession of 1724 and allows the penalties to be waived provided only the work is put right. A penalty of £5 was also, for the first time, laid on workmen wilfully infringing the Act. For a short period longer (1764) all party walls were required to be 18 inches above the roof, but in 1765 (6 Geo. III., cap. 27) the height of the party wall above the roof was reduced to 9 inches above the tiling, and this exposed portion was to be of stone or hard, well-burned bricks. This was again altered to 18 inches by the later Act of 1774.

In 1772 (12 Geo. III., cap. 73) still another Act came in, with a great flourish of trumpets, one of its effects being to penalise the occupiers of rooms or apartments responsible for chimney fires, to the extent of paying the rewards to the various fire engines. The whole Act was, however, dependent upon the common informer, and was soon found to be unworkable, and the great Codifying Act of 1774 (14 Geo. III., c. 78) took its place. This Act is noteworthy as establishing the appointment of District Surveyors in their present form to administer the building laws, and also for the fact that the Act lasted upwards of 70 years, well into the reign of Queen Victoria, without amendment of any sort.

To simplify the requirements as to thickness of walls, &c., buildings were divided into seven rates or classes. The following is a summary of the principal requirements:

Party Walls.

Party wall notices. Requirements of adjoining owner to be complied with. If old party wall pulled down, settlement of differences to be made by a jury.

If either house rebuilt and party wall 4 storeys high is not of required thickness, the party wall to be considered as if condemned or adjudged ruinous.

Timber partitions allowed to remain until one of adjoining houses rebuilt or two-thirds front pulled down to first floor level.

Party walls after 1774 to be carried up 1 foot 6 inches above roof of the highest building (measured at right angle with back of rafter) and to full height of *dormers within 4 feet*.

Parapet walls at least 1 foot above gutter.

No recesses to be made in party wall except chimneys, flues, &c.

No party wall openings after 24th June 1774, to be made in any party wall, except for communication from one stack of warehouses to another, and from one stable building to another, all which communications shall have iron doors.

Timbers, if any, in party wall to have 8½ in. solid brickwork between and at least 8½ in. from any chimney or flue.

Arches Over and Under Public Ways.

In 1st and 2nd class, 13 inches thick; in 3rd and 4th class, 8½ inches thick.

Chimneys and Flues.

Chimney backs to be 13 inches thick in cellar and 8½ inches thick in all floors above *from the hearth to 12 inches above the mantel*.

Breasts at least 8½ inches thick in cellar and at least 4 inches thick in other storeys.

Breasts, chimney backs, and flues to be rendered or pargeted within and without.

Chimney backs next vacant ground to be marked with lime or in some durable manner, except where not likely to be built against.

Hearths to be of brick or stone and at least 18 inches broad and 1 foot longer than opening.

In intermixed buildings the construction of proper party arches and floors was required, and this led to the first *special exemption* for Sergeants' Inn and the Four Inns of Court. Even in the Inns of Court, however, the walls or divisions between the chambers communicating with each separate and distinct staircase were to be deemed "party walls."

Difficulties as to intermixed buildings and party structures were dealt with by a jury specially appointed in each case. No other exemption existed, except for royal palaces and Crown buildings.

Defective Party Structures could be repaired by the building owner giving three months' notice of his intention to repair. Cost was to be apportioned at the rate of £7 15s. per rod for new brickwork, old materials being allowed for at stipulated rates.

Window and Door Frames were again required to be set in reveals at least four inches deep, exception being made for shop fronts and stall boards on the ground storey.

Roofs to be covered with glass, copper, lead, tin, slate, tile, or artificial stone.

Projections from buildings were required to be of brick, stone, artificial stone, etc. (in the same words as Sect. 73 of the 1894 Act), exception being made for cornices and dressings to shop-windows and for covered ways not extending beyond the original line of the houses. No water was to be allowed to drip next the street, except from porticoes and from proper gutters. No pipe conveying steam or smoke to be fixed next to any street. *No bow window or other projection* was to be built after 24th June 1774, next to any public street so as to *extend beyond the general line of the front*, except copings, cornices, fascias, window dressings, or for open porticoes, steps or iron palisades. Bow windows behind the line of frontage allowed if of fireproof material. *Shop fronts*, or rather *stall boards*, however, were allowed, again in terms which have survived word for word to the present day—

In a street 30 feet wide or more, to project 10 inches and cornice 18 inches.

In a street less than 30 feet, to project 5 inches and cornice 13 inches.

Limitation of Size of Warehouse Buildings was effected by prescribing that no stack of warehouses after 1774 should contain more than 35 squares in area, and no additions were to be made beyond this limit, unless the warehouses were divided by one or more party or division walls separating the building into divisions of not more than this amount. Wrought-iron doors ¼ inch thick were required in all openings in such party walls. Stable buildings were similarly limited to 25 squares in area.

Tenement Buildings.—Buildings converted into two or more tenements on the ground floor: each tenement was to be considered as a *separate building*, and divided off by party walls. The penalty clause is interesting, in the light of previous failures to secure the removal of irregularities:

"If any person or persons presume to build or to cause the building or beginning to build or to alter or cause to be altered any building already erected, and be convicted by oaths of two witnesses, then the said house, building, or wall so irregularly built, shall be deemed a common nuisance, and in default of compliance with order, the person making default shall be committed to the common gaol, there to remain, without bail or mainprize, until he shall have abated or demolished or otherwise amended the same."

The Lord Mayor and Aldermen or Justices of the Peace in Quarter Sessions were "to appoint such and so many discreet persons skilled in the art of building, as they shall think fit," and the surveyors thus appointed were to take a solemn oath as to the conscientious performance of their duties. Due notice was required to be given to the surveyor by the master workman or other person 24 hours before the commencement of any work. In case of neglect to give notice, treble fees were payable in addition to a penalty of £20. The schedule of fees payable to the District Surveyors was as under:

| | | | |
|-----------------------------|---------|--|---------|
| New building, not exceeding | £3 10 0 | for 1st class, or for additions and alterations, | £1 15 0 |
| " " | 3 3 0 | " 2nd " | 1 10 0 |
| " " | 2 10 0 | " 3rd " | 1 5 0 |
| " " | 2 2 0 | " 4th " | 1 1 0 |
| " " | 1 10 0 | " 5th " | 0 15 0 |
| " " | 1 1 0 | " 6th " | 0 10 6 |
| " " | 0 10 6 | " 7th " | 0 5 0 |

It will be seen by a careful study that this schedule remains substantially the same to the present day for buildings of the same class or size.

The builder was required to have the building surveyed by the surveyor within 14 days after the building was covered in, and the surveyor to make his affidavit within 14 days.

Dangerous Structures.—On the representation by a jury that any house or building was in a ruinous condition, the Mayor and Aldermen of the City, or the churchwardens or overseers outside the City, were empowered to hoard up the building for the safety of passengers, and to cause notice to be given to the owners to repair or pull down as the case might be, and in default to take down and secure the premises themselves.

Dangerous Trades, such as turpentine distilling, were only allowed if 50 feet away from any other building. The provisions of Queen Anne's Act as to fire engines and rewards for attendance at fires were also re-enacted.

So scrupulously was the Act enforced during the long period of 70 years it remained in force that a special Act of Parliament had to be obtained in 1810 to permit of the use of John's Patent Tessera for covering houses. If every new patent nowadays had to secure a special Act of Parliament our legislators would have their hands full.

In 1840 (3 & 4 Vict., cap. 85) the Chimney Sweepers Act dealing with chimneys and flues was passed.

In the early years of Queen Victoria the coming of the railways and the great growth of population in all directions, and still more perhaps the demand for an efficient drainage system, necessitated a revision of administration. The former parochial system gave way to larger metropolitan ideals.

METROPOLITAN BUILDING ACT, 1844.

By the Metropolitan Building Act, 1844 (7 & 8 Vict., cap. 84), the area of London was extended to include the outlying districts of Fulham, Hammersmith, Kensington, Paddington, Hampstead, Hornsey, Tottenham, St. Pancras, Islington, Stoke Newington, Hackney, Stratford-le-Bow, Bromley, Poplar and Shadwell, Chelsea (detached), Woolwich, Charlton, Greenwich, Deptford, Lee, Lewisham, Camberwell, Lambeth, Streatham, Tooting, and Wandsworth.

It was foreseen that further increase of population outside these limits was probable, and that the tendency to induce building speculation in such neighbourhoods was considerable. Power was



LONDON TWO HUNDRED YEARS AGO—1720.



LONDON ONE HUNDRED YEARS AGO—1810.

therefore actually reserved in the Act of 1844 for Her Majesty in Council to order by proclamation that the Act might be extended to *any district within 12 miles of Charing Cross*.

In order to secure general metropolitan improvements the Commissioners of Works and Buildings (Woods and Forests, etc.) were set up, and to secure uniformity of practice a central office of Metropolitan Buildings was established, with a Registrar and two Official Referees appointed by the Government—the nearest approach to a “Court of Building” which London has ever seen.

The District Surveyors still continued to be appointed by the Lord Mayor and Aldermen or by the Justices in Quarter Sessions, but for the first time the statutory examination qualification was prescribed, which has now been in existence 70 years. Any appointment or alteration of districts was, however, subject to the consent of one of H.M. Secretaries of State.

The Official Referees were architects in practice, whose function was to exercise discretionary powers in certain cases as to what was “good, sound, fireproof, fit, proper, sufficient,” etc. They were the official arbitrators in cases of dispute, and in order to properly record their decisions in cases of relaxation of the ordinary rules, and also to form some check on their actions, the Registrar of Metropolitan Buildings was appointed by the Commissioners of Works and Buildings, both Referees and Registrar being directly employed by Government.

For the first time in 1844 provision was made for *new streets*, which were required to be 40 feet wide, or such greater width equal to the height of the buildings. Every alley and mews was in future to be at least 20 feet wide, or such greater width equal to the height of the buildings.

Drainage, too, was now made compulsory, though one or two requirements sound curious in these days. The main drain under and from every building was required to be at least 9 inches in diameter, of brick, stone, or slate, and laid with a fall of at least $\frac{1}{2}$ inch in 10 feet (1 in 240). Cess-pools, “if built under a house,” must be airtight, and so on.

Open Space about Buildings was also dealt with for the first time, a minimum amount of 100 square feet being required for dwelling houses. Under certain circumstances an open well hole, 75 square feet in area, above the level of the second storey was, however, allowed; but no stipulation was made for any particular width. Every building had to be built with some roadway to it wide enough to admit a scavenger’s cart.

Basement Rooms and Rooms in Roof were only allowed under specified conditions.

The ordinary constructive requirements did not differ greatly from the preceding Act of 1774, the principal differences being:—

(1) The previously existing seven classes of buildings were reduced to *three*, viz.—First, or Dwelling House class; Second, or Warehouse class; Third, or Public Building class.

(2) All Government buildings and Crown buildings were placed under special supervision of the Official Referees, to whom notices and plans had to be sent, and all important buildings were subjected to double supervision by the Surveyor and the Official Referee.

(3) Docks and warehouses of St. Katharine’s, London, East and West India Docks, were exempted from supervision.

(4) Buildings of the London and Birmingham Railway within and in connection with the works of their railway were also exempted.

Disputes as to existing contracts or leases were to be settled by the Surveyor of the district, or on appeal by the Official Referees. Commissioners of Works had power to modify rules on the recommendation of the Official Referees.

Two days’ notice was now required to be given to the Surveyor before commencement of work, and special notices to the Official Referee on completion of the brickwork, and also before occupation. No important building was allowed to be used without a certificate of approval from the Official Referees, under a penalty of £200 a day.

Notice of irregularity in its present form was also introduced, with the important difference

that in case of non-compliance an "order" might be made by the Official Referees without resort to a magistrate.

Three months' notice was still required before rebuilding a party wall, but the adjoining owner was only allowed two months to make any special requisitions, although he had power to ask for the work to be delayed, any dispute being settled by the Official Referees, on the report of the Surveyor for the district. One month was sufficient when building next vacant land.

Chimney breasts on party walls could only be cut away by giving one month's notice and making good *in cement* to the satisfaction of the Surveyor. Any damage done to a party wall, in the opinion of the Surveyor or the Official Referees, had to be made good by pulling down and re-instating.

Existing buildings might be raised an additional 10 feet, with the approval of the Surveyor, even with walls of less than the prescribed thickness.

One month's notice was for the first time held to be sufficient for rebuilding or altering party fence walls. Anybody wishing to raise a party fence wall "to screen from view any offensive object or neighbourhood" could apply to the Official Referees to authorise such work, but not so as to obstruct the free circulation of the air or to injure the property adjoining."

The party walls between chambers in the Inns of Court were specifically brought within the Act, and such walls must be built in conformity with the regulations.

Dangerous structures were dealt with by the Official Referees requiring a survey, the certificate being then sent to the City Corporation, or, if outside the City, to the Overseers of the parish. It was thereupon the duty of the Mayor and Aldermen and Overseers to shore up or hoard in the premises and to give the necessary notice to the owner to repair or pull down within 14 days.

The Mayor and Aldermen or the Overseers could appeal to the Official Referees against the certificate, but the unfortunate owner seems to have had no redress.

Ruinous chimneys, roofs, and projections were dealt with by the Surveyor requiring the occupier (or in unoccupied houses the owner) to take down or secure the same within 36 hours. In default, on complaint to a Justice of the Peace, it was the duty of the Justice of the Peace "to proceed to cause such chimney shaft, chimney pot, or other thing thereon, or the eaves or parapet or coping or slates or tiles on the roof, or projection from the *front or side* wall of such building, as shall be considered by such Surveyor in danger of falling, to be forthwith taken down or secured."

Expenses incurred in connection with party walls were to be valued at the rates and prices fixed by the Official Referees, to whom appeal could be made in case of difference, and the items allowed or disallowed.

Dangerous businesses were, as in the 1774 Act, only allowed in buildings 50 feet from any other building, and at least 40 feet from a street. Public gasworks were for the first time mentioned as being exempt from this provision. Noxious businesses were now, however, added to this restriction.

In public buildings, the floors of all halls, corridors, stairs, and linings were required to be fireproof. Porticoes over the public footway could be sanctioned by the Official Referees, but balconies, verandahs, porches, porticoes, shop fronts, &c., were allowed beyond the general line of fronts if constructed of fireproof materials, but not over the public way.

The existing rules as to shop fronts date from 1774 and have been re-enacted in the majority of Acts since that date. The rules as to chimneys and flues also remain almost identically the same.

Warehouses were allowed by the 1844 Act to extend to 200,000 cubic feet without party or division walls, in lieu of the area previously allowed.

METROPOLITAN BUILDING ACT, 1855.

By the Metropolitan Building Act, 1855, the newly created Metropolitan Board of Works took over most of the duties and powers of the Official Referees and Registrar, who were, of course, suitably compensated, as well as the clerks and other officials in the "Office of Metropolitan Buildings," and the official supervision of Government buildings ceased entirely. The exemption list was at

the same time considerably extended. The constructional rules were slightly stiffened up, for the first time a minimum height of 7 feet being insisted on for habitable rooms. The open space requirement of 100 square feet remained as before. In particular, however, the rules as to separation of buildings were made more stringent, and in any building divided into two or more separate tenements with separate entrances, each tenement was deemed to be a separate building. The allowable size of warehouses, &c., was again increased to 216,000 cubic feet.

The Royal Institute of British Architects now took over the conduct of the Statutory Examination, and no District Surveyor can now be appointed unless he holds the certificate of competency.

The powers of the Metropolitan Board of Works included power to alter the regulations as to thickness of walls and to make general rules as to procedure. A copy of any plans approved by the Board had, however, to be furnished to the District Surveyor, whose duty it then was to see such approval carried out. Dangerous structures were not immediately dealt with by the Board, but by the Commissioners of Sewers within the City area and by the Commissioners of Police outside the City, the Commissioners requisitioning surveys from the District Surveyors as circumstances required. The provisions of the 1844 Act as to dangerous and noxious businesses were still retained in operation.

The fees payable to District Surveyors in respect of new buildings were the same as at the present day, but with a proviso that no fee should exceed £10. A special fee was introduced for inspecting dangerous structures, by direction of the Commissioners of Police, 20s., thus reserving, to some extent, the continuity of Government employment.

The sanitary requirements were dealt with by a separate Act, the Metropolis Management Act, 1855, which has since been followed by other Public Health Acts and by-laws. The City of London Sewers Acts of 1848 and 1851 were the first of these special sanitary enactments, the Commissioners of Sewers being also empowered to deal with dangerous structures.

PRESENT DAY CONDITIONS.

Of the London Building Act, 1894, and its various amending Acts (of 1898, 1905, 1908, 1909) I need say but little. The Act is at present in force and its provisions are every day in constant use or abuse. Most critics will agree that the present Acts and by-laws made under the Acts, although somewhat complex and in need of simplification, are by no means too stringent. In some respects possibly the requirements are too lenient. For instance: Concrete need only be 9 inches thick, instead of 12 inches, the usual minimum depth outside London; lime concrete is allowed, instead of cement concrete required elsewhere; the use of burnt ballast is permitted for concrete; and so on; and, strange to say, the special by-laws as to the composition of bricks, concrete, plastering, and mortar are not in force within the limits of the City Corporation; in other words, the constructive requirements, instead of being more stringent in the City, are entirely the reverse.

Much good has been done by the improved provisions as to air space at the rear of buildings. The tendency of the relaxations permitted by the Act in rebuilding premises on narrow streets will also have an immense bearing on the future of London, but in the reverse direction. As things at present stand, an old building, even one storey in height, whose plans have been duly certified by the District Surveyor, may be re-erected of any height up to 80 feet, subject only to certain restrictions as to working-class dwellings, which, since 1894, are required to be set back to increase the width of the street to the same as the height of the new building.

This restriction does not apply to warehouse or similar buildings, and, given certified plans of the old buildings, it is possible to erect huge warehouses 80 feet high on old sites previously occupied by two-storey houses, without possibility of restraint except from owners of adjacent "ancient lights." If the premises are in the same ownership the unfortunate occupier has no remedy.

In one case that has been brought to my notice the present street is only 15 feet wide, with houses not more than 18 feet high, but there is nothing to stop the erection of new buildings to almost

any height, and, with the best of intentions, the County Council is at present powerless in this respect. Old and insignificant buildings in advance of the general line of buildings may also be re-erected without let or hindrance, provided they do not exceed 80 feet in height.

The state of London's narrow streets is steadily going from bad to worse, and with the erection of newer and higher buildings in place of the old, the future prospect cannot be regarded with equanimity by anyone having the interests of London at heart, and London improvements are, under these circumstances, daily becoming more costly. A right to re-erect old buildings to the old height may be reasonable, but, in the interests of the community, any increased height should be under careful regulation. Power is also needed in the interest of wise town extension to fix building lines both for new and old streets, and to regulate the height of buildings in relation to the width of the streets on which they abut.

IMPROVEMENTS OF THE NINETEENTH CENTURY.

The continual growth of the Metropolis in the early half of the nineteenth century was the subject of much thoughtful attention. The turnpike trusts were gradually consolidated, and Commissioners were even appointed to lay down various new routes for main roads leading out of London. The Seven Sisters Road, Holloway, and Goldhawk Road, Shepherd's Bush, were amongst the results achieved about 1833, before the coming of the railways. Then, too, about the same time (1829) an interesting suggestion was made that London should be allowed to grow in concentric rings of town and country, the belts of suburbs being separated by broad parklands. Unfortunately this project was not considered seriously.

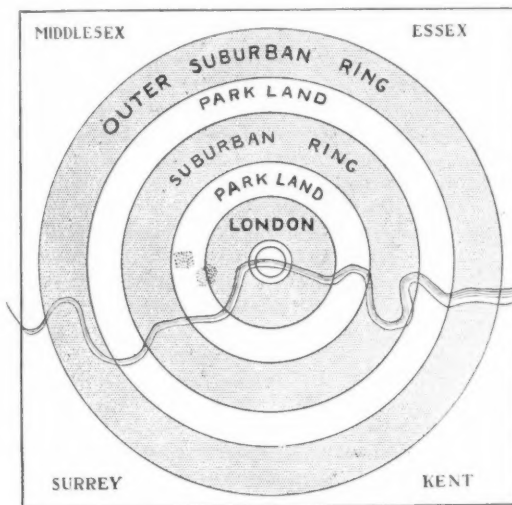
Between 1832 and 1851 some eleven or twelve Special Commissions were appointed by Parliament to consider various plans for the improvement of the Metropolis:

- 1833. Open Spaces and Public Walks ;
- 1836. Metropolis Improvements ;
- 1838. Metropolis Improvements ;
- 1844. Metropolis Improvements Commission ;
- 1846. Metropolis Railway Commission ;
- 1855. Metropolitan Communications ;

to which may be added the Royal Commission on London Traffic, 1905. Many of the proposals attached to these reports are of great interest. The early successes of the railways, however, destroyed any hope of improved road communication, and for nearly eighty years hardly any new main roads have been constructed.

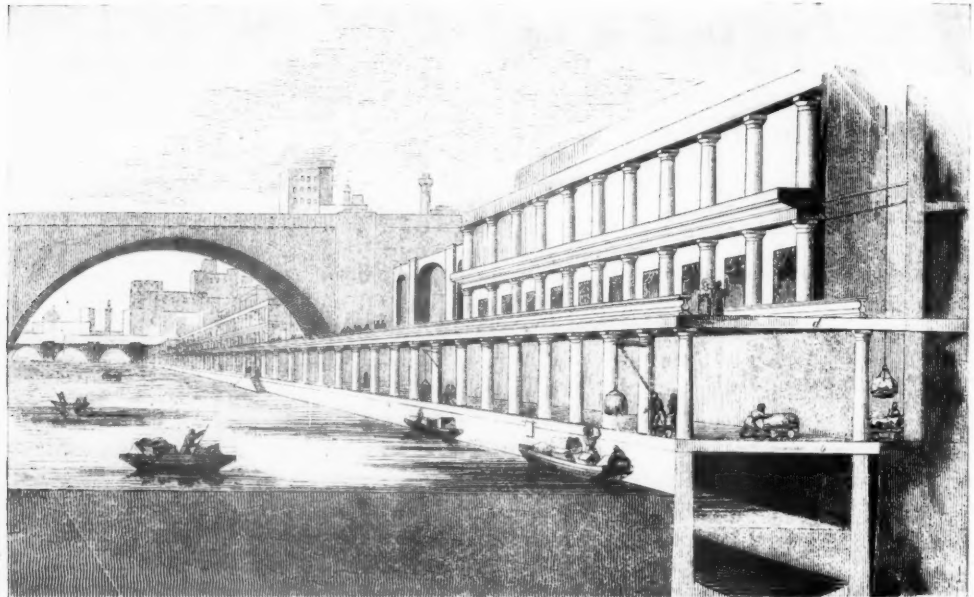
A proposal which had great weight at the time it was introduced, and afterwards resulted in the construction of the main intercepting sewers, was a plan introduced in 1836 by Mr. John Martin, R.A., who was well known as an artist. Mr. Martin's plan was submitted to the then Institute of British Architects on 29th February 1836, and was warmly approved. Briefly his proposal was for the construction along each bank of the river of a large sewer 20 feet wide, the purpose being primarily to divert the many offensive sewers then discharging direct into the river. The proposal, however, involved much more than this, including, as it did, a continuous extent of quays or public promenades along the whole river front. Here we have another forerunner of the Embankment scheme.

A Select Committee of the House of Commons had been previously appointed in 1833 to consider



Proposal made in 1829 to provide for future growth of London.

the necessity of Public Walks and the Propriety of Establishing Public Baths. From the evidence before this Committee it appears that at that date there was not a single public open space or public walk north or east of London, anywhere from the Hampstead Road round to the river. Even now, with the exception of the disused burial grounds and the open spaces of Moorfields and Victoria Park this area is not much better served.



PROPOSAL FOR THAMES EMBANKMENT (SOUTH SIDE), 1836, BY JOHN MARTIN, R.A.

STREET IMPROVEMENTS OF THE NINETEENTH CENTURY.

Apart from innumerable street widenings, the following is a list of some of the important new streets cut through the built-up area during the century :—

| | | Opened |
|---|-----------|--|
| Regent Street... | ... | 1819 |
| Cranbourn Street ... | ... | 1844 |
| New Oxford Street and Endell Street | ... | 1845 |
| Victoria Street, Westminster (with aid of considerable grants from the coal duties) | ... | 1852 |
| King William Street, London Bridge | ... | 1834 |
| Moorgate Street ... | ... | 1846 |
| Cannon Street (Western Portion) ... | ... | 1854 |
| Farringdon Road ... | ... | 1856 |
| Holborn Viaduct and Charterhouse Street | ... | 1869 |
| | Completed | Completed |
| Garrick Street ... | 1861 | Northumberland Avenue ... 1876 |
| Southwark Street ... | 1862 | Eastcheap (Over Metropolitan Railway) ... 1884 |
| Burdett Road, Victoria Park ... | 1862 | Shaftesbury Avenue ... 1886 |
| Queen Victoria Street ... | 1871 | Charing Cross Road ... 1887 |
| Commercial Road (extension) ... | 1870 | Rosebery Avenue ... 1892 |
| Holborn (removal of Middle Row) ... | 1867 | Middlesex Street (extension) ... 1896 |
| Commercial Street, E. ... | 1858 | Tower Bridge Road ... 1894 |
| Great Eastern Street ... | 1876 | Strand widening, Aldwych and Kingsway ... 1905 |
| Clerkenwell Road and Theobald's Road ... | 1878 | Charing Cross and Mall and Processional Way ... 1910 |

Thames Embankments.

| | |
|---------------------------|------------------------|
| Victoria Embankment, 1870 | Total length, 3½ miles |
| Albert Embankment, 1869 | |
| Chelsea Embankment, 1874 | |

Principal New Parks.

Regent's Park, 1820.

Victoria Park, 1841, cost £130,000.

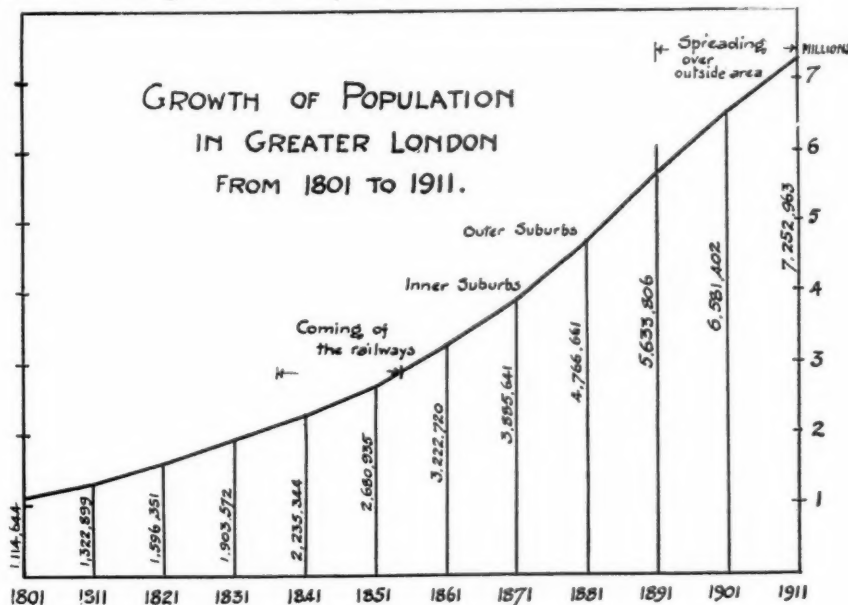
Battersea Park, 1846, cost £316,000, all then on the outskirts.

Finsbury Park, Brockwell Park, and many others.

The question of finance has always been a difficult problem, and in the early Commissions we find considerable space given up to the consideration of public lotteries as a means of raising money. But, after all, there is plenty of money available, and we have only to remember the reckless hacking and cutting that was done by the railways a half century ago to see what great things are possible. Paris has spent her millions and is still willing to spend freely; why not London?

Nearly all the London improvements of the past have been carried out by means of indirect taxation. The coal tax of 1s. 3d. a ton which was devoted almost entirely to purposes of street improvement produced in 1859 as much as £240,000, and is stated not to have been appreciably felt. The coal tax was finally abolished in 1890 (and the price of coal is no lower).

The growth of London has all through the centuries been a source of wonderment and pride to successive generations of Londoners. Each generation, as it entered into its inheritance, has felt a glow of conscious pride at the immensity of the City, and each in its turn has felt that the limit of the vast metropolis had been reached and that the prodigious increase could not go on. It has gone on though, and bids fair to keep on going on at an even accelerated pace. The following diagram of the growth of London during the last century will make this clear:—



Statisticians may say that the last decade shows a decline, that the County of London has actually less people than ten years ago; but *London* knows nothing of county boundaries or administrative areas. The vast community which looks to London City as its focus is spread over an area much greater even than the Greater London of the Metropolitan Police area, stretching as that does to a circle of over 30 miles in diameter. In less than fifty years the population will be double what it is to-day; the present generation has before it the task not only of improving our present-day London but of building an immense city as large again, which shall encircle it north, south, east and west. We must prepare, and prepare at once, for so gigantic a task. We can see ahead but a little way, but that little way is lighted by the illumination which comes to us from the past.

DISCUSSION ON MR. DAVIDGE'S PAPER.

Mr. H. V. LANCHESTER, *Vice-President*, in the Chair.

The Right Hon. VISCOUNT PEEL, Chairman of the London County Council, in moving a vote of thanks to Mr. Davidge, said he had never listened to a Paper on the subject of London which had interested him so greatly. The reader had touched upon a variety of complex subjects with a sure and a most entertaining hand. He confessed, as one of London's administrators, it made one feel a little modest if one was inclined to be arrogant as to the improvements and changes which they were introducing into London at the present time. Their wildest dreams seemed but a pale reflection of some of the designs and proposals of their ancestors. He had been struck by a little coincidence in the course of the Paper. The reader referred to the Report of the Royal Commission on Traffic, and it would be remembered that—not in the Report itself, and he drew their special attention to that, because a good deal turned upon it—in the Report of the Engineers they suggested one great road to run north and south, and another great road to run east and west. But that appeared to be not an original suggestion; it was a sort of Roman plagiarism drawn from the old maps of early London, which showed the town beautifully and evenly divided by one road running north and south, and another running east and west. As one who had been Chairman of the London Improvements Committee, he could not help a feeling of regretful emotion in looking at that picture of Saturn-like London with its rings of buildings and rings of park lands; how delightful they were, and how unattainable they seemed to us! Studying these old maps, one could not help being struck by the many admirable things which were not only imagined, but actually carried out in those days—such, for instance, as the noble 150-feet wide road originally planned from Pentonville to Edgware Road. These things were designed when London was much smaller, and later, during some obscure time—in the times of our grandfathers, let us say—there seemed to have been a forgetfulness of these things, a sort of lax period had set in when all those splendid schemes were forgotten and the open spaces so wisely planned were built over. People criticised the London County Council because they did not start some of those gigantic schemes. London, they said, deserved, and ought to have, great bridges, and wide and noble streets. But when the rates were put up a modest 2½d. in the £—a mere trifle, surely, to such a wealthy city—the whole world, architects,

artists, even the London Society itself, reproached the Council for such an infringement of their pockets. He thought it a very great thing that the Local Government Board had started the Arterial Road Conferences, to two of which the Chairman of the present meeting was lending his assistance, and he hoped some conclusion would be come to as to what should be the scheme of the main roads in the districts outside London.

CAPTAIN SWINTON, in seconding the vote of thanks, said it was a most painful thing to realise what we in London had lost, and how many opportunities had been given us by far-seeing men in the past, and how woefully we had neglected them. There were, however, certain opportunities still with us. If we could only get everybody to combine to see it through, there was a chance of doing something really fine on the south side of London, on that bit of ground between Blackfriars and Westminster. If the County Council could only get the Aldwych block off their hands they might find some possibility of launching forth. Mr. Davidge had shown them what they had missed within the County boundary. Outside it the same thing was going on every day. There was the wretched proposal of the by-paths road to get rid of the Brentford block. It would have very little effect, however, and it was not desired by the Brentford people. They wanted their High Street widened, so that they could get benefit in selling their frontages again. We did not look at these things from a big enough point of view. His personal view was that traffic and locomotion facilities were the secret of town planning. He felt some diffidence in saying that to architects; but he thought engineering and locomotion facilities should come before the building of houses. By enabling people to get further out opportunities were got for building fine houses which could never be got in these days on crowded ground. The more we could do to spread London—and the further out the better—the greater the advantage for the London of the future. Looking at the maps shewn them that evening, from the time of Elizabeth onwards, it seemed that the powers of the time were thinking only of the little bit for themselves; they never looked far enough ahead. And we were doing the same thing to-day. He could not imagine anything more useful to publish throughout London and every big city than a series of maps to show the opportunities which had been thrown away;

then they might rouse some public feeling which would tackle these things in a big way and insist that, somehow or other, a solution should be found. Personally, he did not think they should run the ratepayer too hard. For the Imperial City, the Capital of the Empire, they ought to be able to get some assistance from the Imperial Government. Another point was what he should call the neighbourly feeling; and he wished all the members of the architectural profession had rather more neighbourly feeling as regards the buildings next door to those they put up. There was the case of the Piccadilly Hotel and the building which had been erected next to it. He did not know who was responsible for it, but he thought it was a shame to the architectural profession. There was another example at the bottom of St. James's Street; that very fine red-brick corner house built by Norman Shaw. The house harmonised well with the old buildings of St. James's Palace; but to the right front they had now begun to put up stone buildings. Why had it not been possible to continue that building of Norman Shaw's for a certain distance, and so make a finished end of that corner of St. James's Street and Pall Mall? Lord Peel had mentioned Delhi and Building Acts. Delhi was in the fortunate position that the Government owned all the land of the new city, and presumably it would see to it that the class of buildings put up was entirely according to Government requirements. Mr. Lutyens and Mr. Baker, who arrived in England only on Saturday, were to continue for the next few years to spend the winter in Delhi; they would not only be responsible for Government House and the Secretariats, but also for most of the buildings to be erected in the new city of Delhi. With regard to the Building Act rules, ancient lights, etc., which had been mentioned, probably every house in Delhi would stand in about three acres, and there would be avenues 150 or 200 feet wide, and everything would be done on such lines that it would be a proper Garden City. He only wished they could make their Building Acts in England so that such facilities should be given.

PROFESSOR HAVERFIELD said that with regard to the point Mr. Davidge had made about there being streets in London which were streets that the Romans had walked upon, that was a matter he should like to consider. He was not inclined to believe, though he knew that Sir Lawrence Gomme differed from him in that, that there was much left of Roman London in modern London. If a Roman temple had been found under the street, it was obvious that it was not a Roman street in Roman times. He did not think it would necessarily follow that if we found some of the streets of Roman London were continued in the streets to-day, we should be making out a continuity between the London of to-day and the London of Roman times. In Carthage, in North Africa, and its neighbourhood, there were field-paths which were the field-paths laid out by Roman far-

mers, but no one supposed that the Arabs had any connection with the Romans who laid them out in the time of Julius Caesar or the Emperor Augustus. The continuity of history did not work entirely in that way. That was a problem of possible interest, but not one of very great importance. The importance of Mr. Davidge's Paper lay in the point raised by the first two speakers—viz. what was to be done with the London of the future.

SIR LAWRENCE GOMME, F.S.A., Clerk of the London County Council, said that perhaps his enjoyment of the Paper had been the greater because he had detected in the later events of the Building Acts which Mr. Davidge had described just that possible continuity between the earliest periods and the later ones which Professor Haverfield did not see. He (Sir Lawrence) put it in this way: That the Building Act in the twelfth century which succeeded the devastating fire in King Stephen's reign, having for its object the construction of stone buildings in place of the buildings which had been erected in the previous hundred years, was one of two things: it was either a direct copy from the Roman Buildings Acts, or it was a descendant of a previous tradition of Roman buildings which had come down through the custom of the city which we know was so prevalent. Apart from that point, the continuity of the building provisions in London was a very remarkable thing. One got it through the Middle Ages, one got it in the Tudor period, and, above all things, one got it in that most remarkable period after the Fire of London when London had the one chance of rebuilding itself. He liked to think that the debate on the Bill, of which we had record in the House of Commons, showed that a certain Colonel Birch described to the House of that period a plan which he would adopt if he were going to rebuild London. And he put it in this way—it is recorded in Evelyn's Diary—that London ought to consider itself as one big estate, and the rebuilding of an estate means rebuilding in a fine way, rebuilding with magnificent streets, because those magnificent streets will assist the values of the houses upon which they are built. But the selfishness of the London owners of that period was only equalled by the selfishness of the owners of the present day. They would have nothing to do with it. And the consequence was that Wren's magnificent plans were put on one side, and we had the present picture of London. But there was one bright spot in that period. When Wren took his magnificent design of St. Paul's Cathedral before the King, Charles II. did one of those very fine things which Stuart kings could do—in the midst of all their stupidities, they could do magnificent things. And King Charles II. almost anticipated the action of the Czar of Russia in saying to Wren, "That building is to be built forthwith," and St. Paul's Cathedral was built forthwith. If it had not been for the King's dictum, what would the result have been? The whole period of the Building Acts bristled with the idea of London being a great city. James I., in one

of those curious documents which he sent forth to his capital city, described how the Roman emperors wanted to make Rome a big city, and James I. was imbued with the same idea; he wanted to make London a big city. Mr. Davidge had described how that idea had come down to us; but it had never yet been actually carried out. And one felt that, somehow or other, that policy had got to be brought about before we could connect together the rights of the landowner and the benefits which would come to him when we broadened out and made London what it ought to be. He thought Mr. Davidge's Paper would refresh the minds of those who wanted to be refreshed that the periods of the past in opening up new projects and in finding those new projects never carried out would perhaps bring about a new conception of things, and would enable, if not the ratepayer, at all events some interested payer, to see that it was to his benefit and to his advantage to enlarge and make beautiful this beautiful city of ours. And he was still one of those with optimistic feelings that that sort of thing would come about in the near future.

MR. ANDREW TAYLOR [*F.*], Chairman of the Improvements Committee, L.C.C., said he should like to thank Mr. Davidge for his remarkably interesting Paper. He had always held that these Building Acts constitute a fascinating subject, but he could never persuade some County Council members to come into his Committee-room; and if they ever did so, he noticed they were very unhappy, and endeavoured to get out as quickly as possible. It was difficult sometimes even to get a quorum. He wanted to pay a tribute of admiration to the members of the District Surveyors' Association. They were an admirable body of men, and their lecturer that evening was a distinguished member of that body. District Surveyors were often much abused, but he had had the privilege of being Chairman of the Building Acts Committee for four years, and had come very much into contact with them, and he took this opportunity of saying that they were a body of men who were discharging their duties, often unpleasant duties, in the face of much difficulty, and doing it well, and placing their mark upon London for good; and he hoped the British public and London generally would more and more appreciate the work of the District Surveyors and what they were doing for London. He wanted to raise a note of optimism. It was the fashion nowadays to abuse London and to call it a chaotic mass of jumbled narrow streets, poor buildings, etc. He protested against that. Taking London altogether, there was no city in the world like it. There was, of course, much to be said for Paris; but one gets tired of Paris, and comes back again and again to dear old dirty smoky London, and feels that there is a fascination and a charm about it which no other city possesses. He felt tremendously that optimism, and he spoke as Chairman of the Improvements Committee of the London County Council. It was rather difficult to follow

Lord Peel in such a position, but he intended to do what he could in the way of inaugurating some new schemes for London. It was difficult, however, because they must proceed with the London ratepayer before their eyes. Probably they had all employed their juvenile efforts in improving London on paper, had made plans for transforming Trafalgar Square, Piccadilly Circus, Hyde Park Corner, and other places. But when one came face to face with the practical necessities of the case, and the spending of money, one took a different view of the matter. Those who abused the London County Council for not doing anything for London, or for doing it in the worst possible way, must bear this in mind. There were many schemes the Council had in view, and really they were doing something for London; it was improving every day. There was no finer improvement in any city he knew of than the Thames Embankment. Kingsway and Millbank were also fine improvements, and there were others coming, and as soon as the Council had the money it would be found that they were full of great schemes, and gradually the ideas would evolve and materialize. But we must not be impatient. Rome was not built in a day, neither would London be improved in a day. It was better for it to grow in beauty, gradually unfolding itself. It was coming; it might not be in our time, but we should have the consciousness and the feeling that we had done our share in improving the London which we all love.

MR. A. A. HUDSON, K.C., Chairman of the Tribunal of Appeal under the London Building Act, said that in looking at the maps Mr. Davidge had shown them, one hoped that at each period the municipality, or whatever the power was, would have stepped outside its immediate surroundings, and started a road upon land and in places where the land could be acquired cheaply. That was what they were doing in Liverpool. There they found that by going three or four miles out they could make a magnificent road, and acquire land for the purpose without going beyond a certain figure. They found that by this means they could make roads for £10,000 a mile, whereas if they were to attempt anything of the kind in the city itself the cost would be more like £200,000 a mile—quite a prohibitive price. That was one suggestion which he made, with great respect, to those who had power to carry these things out, that they should jump ahead of the times, and go so many miles out and make roads where the land was cheap. Next, he would suggest that they invest a Tribunal of Appeal, or some other body, with a little more power than they had now. At present all they had to do as a Tribunal, and all the Superintending Architect had to do, was to fix a general line of buildings—that is to say, to determine the general line of the existing buildings; whereas if the Superintending Architect were given power to fix the building line at the start it would be a totally different matter. They should not try to take the land for nothing; they must pay some compensation. It might not

be a large sum. Vast improvements would have been secured for London of the future if only they had had power to fix the building line instead of the general line. In certain comparatively small ways they could improve the inner parts of London, but he did not think it possible for them to carry out the enormous schemes sometimes proposed for the centre of London, owing to the vast expense. It was to the outside of London that they must look for great improvements. He associated himself with the other gentlemen who had thanked the reader of the Paper for his excellent contribution.

Mr. EWART G. CULPIN, Secretary of the Garden Cities and Town Planning Association, said that one thing which came to notice at the District Conference held that morning was that Colonel Hellard said he had just been in consultation with a number of surveyors of the North-Eastern Section into which London was divided by the Traffic Report, and he found that the circular avenue North which was deemed practicable as the best route a few years ago was impossible now because of the building which had taken place in the last two or three years. If they were going to have these circular roads at all, it was time they did something in that direction. And as the matter had been before the minds of thinking people and dreaming people for hundreds of years, they had an opportunity now, through these District Conferences, and it was hoped that a ring road or a park belt, such as other nations had and which was their admiration and joy, might come to London, and that London in slowly unfolding itself, as had been said, might have some of those tracts of green provided. He would also like to mention the fact that Mr. Davidge would be leaving in a few weeks for Australia, to carry the gospel of town planning there. In the last three days messages had been received from practically every one of the Ministers to the different Dominions in Australasia, and from practically every important city, stating that arrangements were being made by professional men, and by committees of the various municipalities, to welcome him on his arrival there to teach them something about town planning. He was going there with the good wishes of the R.I.B.A. and other bodies interested in town planning. It was to be hoped that on the other side, where there were enormous possibilities, they would be able to avoid some of the mistakes which London had fallen into. Mr. Davidge's visit was being looked forward to eagerly, and it was understood that at least three of the Dominion Governments were proposing to make grants towards the expenses of his lectures.

Mr. E. FIANDER ETHELLES [*Hon. A.*] said that Mr. Davidge had referred to the Assize of FitzAlwyne, which was introduced in 1189, before the introduction of our present Parliamentary system.

Under that Assize any citizen could demand at the weekly hustings that the Mayor and a committee of twelve men could enforce the rules with regard to buildings. He saw in that Assize a prototype of the present Building Act Committee and their weekly meetings. With regard to the stringency of the Building Acts, they sometimes heard that this point or that point was stringent. But taking a general view of the whole of the Acts, not only those now in force, but those in the past, with the maximum penalty of forty shillings, he failed to find anything really stringent. For stringency they must go to the codes of places between London and the new Delhi referred to by Captain Swinton. Take Babylon for instance. According to the Building Laws of Babylon:

Section 229: If a builder has built a house for a man, and his work is not strong, and if the house he has built falls in and kills the householder, *that builder shall be slain.*

Section 230: If the child of the householder be killed, the child of that builder shall be slain.

Section 231: If the slave of the householder be killed, he shall give slave for slave to the householder.

Section 232: If goods have been destroyed, he shall replace all that has been destroyed, and because the house that he built was not made strong, and it has fallen in, he shall restore the fallen house out of his own personal property.

Section 233: If a builder has built a house for a man, and his work is not done properly, and a wall shifts, then that builder shall make that wall good with his own silver.

Would not such provisions ensure safer building in London?

The CHAIRMAN (Mr. H. V. LANCHESTER) said he was particularly interested in the early part of the Paper. It reminded him of a book by a French author, whose name he had forgotten, entitled "The Dead that Speak." The theme of the book was the influence of heredity generation after generation. The striking parallels that Mr. Davidge had given them indicated the uniformity in London's manner of thought throughout the last seven centuries. In the matter of rights of light he had always felt that the recognition of those rights, which were only of gradual growth, was a mistake and not in the best interests of the community. The twelfth century was more rational in this respect. One might derive some satisfaction from the fact that in recent years these "rights" had been less stringently interpreted. Coming to Mr. Davidge's point as to the possibility of high buildings in existing narrow streets, he agreed with him that some such rule as he demanded was urgently needed. He would suggest a limiting angle of 60° from the opposite side of the street as the least that would be satisfactory. The question of street proportions came in here. With the existing maximum height no street could appear spacious unless it was at least 120 feet between the frontages. It was very interesting to note the recrudescence from time to time of the ideal of a surrounding open zone. The idea had its attractive side, but he did not feel it to

be the natural solution of the problem of London's open spaces. It was an exotic imported from elsewhere. With the varied conditions around our metropolis, the natural features of the country supplied the main factors in determining open spaces, but he had long maintained that if any general principle was to be observed, it would be that parks should radiate outwards, like Epping Forest, rather than form a closed zone. Of course, the railways now formed an important factor in the problem of outer London, and there was urgent need to devise machinery for dealing with railway enterprises in their relationship to other requirements. It was very difficult to provide for every circumstance in a series of hard-and-fast by-laws. A much better result could be achieved if cases could be intelligently considered on their merits without the restrictions of a number of hard-and-fast rules. This was, however, he presumed, too much to hope for, but at all events they should try to keep up-to-date with their regulations, which sometimes lagged several decades behind the requirements of the day. For example, the limitation of cubic contents inflicted a hardship on their business enterprises which they did not experience in any other important community, and which the insurance rates proved to be absolutely unjustifiable. There were other regulations aimed at minimising fire risks which, however well intentioned, were particularly ill-adapted to existing conditions. Again, architects would long ago have devised a satisfactory substitute better suited to this climate than the awkward and untidy shop blind, in a projecting hood glazed with refracting glass, but for the fact that they were precluded from using such a device by the regulations. He doubted if Mr. Davidge could induce anyone to re-impose the coal duties, however much such a course might appeal to the Smoke Abatement Society. The argument as to cost was, of course, a fallacious one, and he did not credit Mr. Davidge with intending it seriously. At any rate, they had

the petrol tax to take its place. The fact that Gwynn, an architect, did so much a century and a half ago towards foreshadowing the London of to-day might well encourage us in our studies for London's future. "It is part of my faith," concluded Mr. Lanchester, "that the architect's training and practice render him peculiarly well qualified for such a task, and I have great hopes that the architect will have an important share in bringing our great city into conformity with the ideals, not only of our day, but, as Mr. Davidge has shown us, of the whole extended period of her recorded history."

The vote of thanks was then put from the Chair and carried by acclamation.

Mr. DAVIDGE, in reply, said he must first express his very great appreciation of the many kind remarks that had been made with regard to the Paper. He would point out that in any scheme for the extension of London it was not necessary to spend millions immediately. What was wanted was some common-sense plan, which could be carried out slowly, as it was needed. A plan cost nothing to prepare. London already possessed the necessary powers, and could develop along that plan. Certainly a plan must be prepared for the future growth of the outskirts. He was very much interested in the point raised by Sir Lawrence Gomme and others with regard to the continuity of history, and he felt strongly that we were, after all, only working out our part of the great plan, that we were carrying on the tradition of those who had gone before us, and that those projects which had been shown on the screen, and which Mr. Lanchester and others were making now, would undoubtedly be carried out, though possibly not in our time. After all, a lifetime was but a short space in the history of a great city like London, and we must be thankful if, at any rate, we could play our part in the extension of this mighty city.

CORRESPONDENCE.

"Borrowing in Architecture."

To the Editor, JOURNAL R.I.B.A.,—

SIR,—It is with much interest that I have read the paper by Mr. March Philipps on "Borrowing in Architecture," which appears in the JOURNAL of the 28th March. It is suggestive, stimulating, and challenging; but is it convincing? I trow not. I agree with the remarks of the President, that it is another distracting contribution to the much-vexed question of the meaning of modern architecture in its relation to modern life. It would seem that Mr. Philipps has failed to grasp the true inwardness of the situation, which depends on the basal fact that architects are a part of life and conditioned by environment; and surely it would be difficult to demonstrate conclusively that art to-day has "lost touch of life," or that it has become exhausted and incompetent to deal with the problems of life, or unable to digest and assimilate the work of the past. The whole evolution of architecture, through variations of style, provides a long series of proofs that Architecture steadily reflects national ideas and needs. Heighten and quicken the life of a country and Architecture will respond. We see this if we place ourselves at the beginning of the 19th century and realise the great new, controlling conditions which then began to operate, by reason of the application of science to daily needs. Science, which had so long been the basis of research for the few, became the basis of practical life for the many; it passed out of the study and laboratory into the workshop and factory. It created a silent revolution in our midst. Steam transformed travelling and changed the ways of commerce; electricity "put a girdle round about the earth" for human intercourse; coal yielded gas for lighting, and phosphorus provided the lucifer match. No wonder that before this onslaught of applied science the foundations of all tradition were shaken so that it can never again stand in its old, unassailable position. All this national tumult and turmoil had its inevitable effect upon tradition in architecture, and ushered in a period of revivals and experiments which most of us would agree should be termed "borrowings;" but out of the chaos of undigested styles was evolved a compromise—truly English—which gave us Gothic churches and Renaissance public buildings, while dwelling-houses assumed a quiet and dignified Queen Anne and Georgian style all their own. They were the result of having assimilated, and not merely borrowed, past styles.

But surely Mr. Philipps has unduly stretched the word "borrowing" to fit his theory; so that, like an attenuated elastic band, it includes a mixed bundle of mutually destructive ideas.

Architects have inherited a great past, and just because we have entered into this heritage with all its possibilities of development there is no need for us to be "borrowers." We can spend and develop our own estate, and need borrow from none; but the one

thing needed for vitality and vigour in a national art is, that the nation should know its needs and formulate its demands; civic authorities must not be content to administer by-laws and Building Acts, but must cherish that pride of place which shall be concerned, whether for a railway station or a village hall, to have a thing of beauty, designed with regard to its functional fitness. Progressive communal life creates progressive architecture; changing purpose brings in change of treatment, which in itself tends to eliminate "borrowing" and necessitates a process of assimilation.

In many ways architecture resembles language; both have their grammar; both express national ideas, and both have been gradually evolved through the centuries. Although our speech is similar to that of Shakespeare's day, that does not prevent a certain growth which has fitted the language of to-day to the changing ideas and needs of science and civilisation. We may say that it is no more possible deliberately to invent a new architectural style than it is deliberately to invent a new language; any such attempt results in "l'art nouveau" and "cubism" in art and in "Volapuk" and "Esperanto" in language. It is the new idea that gives new life and helps the artist to develop his great estate without having recourse to usury.

The past is, indeed, a heritage which it would be folly to throw away. It is the great privilege of the architect to blend both past and present, and by passing the art of the ages through the crucible of his own personality, and fitting it to the new purpose, he produces something new which still conforms to traditional canons of art because it is the product of an unconscious process of assimilation.

BANISTER F. FLETCHER [F.].

The New Ruskin—with Two Suggestions.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Courage was necessary for Mr. Philipps' breezy attack. Although he seems to appreciate that criticism is valueless unless preceded by appreciation, it is easy for a critic who is not an architect to be iconoclastic without a constructive policy. Borrowing in architecture is not only not to be deprecated, it is necessary because it is impossible to devise anything new, *i.e.* any beautiful thing. Originality does not exist otherwise. It is, moreover, just because the artist is miles ahead of his plagiarist that the Copyright Act is of no use to him.

I would suggest that the whole of the potter raised in the *Morning Post*, although excellent journalism and very readable, is based on a false premise. The assumption is that we have no style or that all styles are dead. But the fact is that Architecture, being more international than ever before (owing to the rapid transit of materials, photography, and other causes), has adopted all styles, and it is only when the vitalising spark is absent in the designer that any style may appear dead.

One danger to-day is the versatility of person-

ality. The punishment does not always fit the crime. We find green slates and tarred chimney pots on a country cottage near a Surrey village where all the old work has charming red roofs of tiles; another genius has given us oriental flavoured domes on the new Government offices; and many another anachronism might be given.

An evident danger is the confusion of eurythmy with symmetry. Following the Beaux Arts-ideal all parts must be rigidly equal. The axial lines and a pair of compasses do it all. Externally the T-square and set-square do the rest! Most architects cling to the notion that superimposed columns (as in Jones's Whitehall) and regularly divided rustications make good architecture. They spell poverty of invention. It is precisely because matters-of-taste which should be matters-of-knowledge but are not to-day that it is necessary to ask why. The answer, I venture to submit, has nothing to do with harking back to mediæval crafts, but has to do with inner vision. All the finest works of man in art have one quality in common and only one, that is a certain blitheness of expression. It matters nothing whether the style be trabeated or arcuated, old or new; if that vital essence be absent no amount of aspiring lines, of trimmings—caps, pilasters, grotesques, pinnacles, *et hoc genus omne*—will endow it with life. To some men it is easier to invest their buildings with this quality in one style than another, but that is only a matter of individuality and has nothing to do with the principle.

"History shows you men whose master-touch
Not so much modifies as makes anew;
Minds that transmute nor need restore at all."

I should say that the general level of architecture is to-day probably better than ever it has been, but that public appreciation is exactly in inverse ratio. Is it possible and feasible to educate (*i.e.* draw out the best that is in) the public?

(1) In 1893 I suggested that the R.A. should open the rest of the Burlington House Galleries at the time of the Old Masters Exhibition in the winter, for a representative show, each year, devoted to the Mother of the Arts, by means of models, photographs, sculpture and working drawings (perspectives of the present Academy type being excluded). I am sure that the painters would welcome another room (and invest it with charm) even though it be a cul-de-sac where the somnolent rest and eat sandwiches. The summer exhibition would then be Painting, and the winter one Special, Architecture and Sculpture.

(2) If the R.A. Council do not see their way to perform this duty to the public, and so put Architecture in its due place as the first of the Fine Arts, then it seems to me that our Institute should undertake it. The public would then have some sense of proportion shown to them, and interest in new work would gradually be awakened in such a way that even shopkeepers (as in the Italian Guilds in 1500 A.D.) would be reliable critics.—Yours faithfully,

P. A. ROBSON [A.].



9 CONDUIT STREET, LONDON, W., 11 April 1914.

CHRONICLE.

Exhibition of British Architecture in Paris,
13th to 23rd May 1914.

In response to a request made by the President of the French Société des Architectes diplômés, the Royal Institute of British Architects and the Architectural Association are co-operating in the work of organising the first Representative Exhibition of British Architecture to be held in Paris.

The Exhibition, which has aroused considerable interest in Paris both as evidence of the cordial relations now existing between Great Britain and France and as an introduction of British Architecture to the French public, will be held in the Old Tennis Court of the Tuileries, which has been lent to the committee by the French Government at the request of the Société.

The President of the French Republic has signified his intention of officially inaugurating the Exhibition (should political circumstances permit), and it is anticipated that he will preside at the annual banquet of the Société, which will be arranged to coincide with a special week-end visit of British architects to Paris, and to which the Presidents of the R.I.B.A. and the A.A., with several other distinguished architects, have been invited.

Owing to the exigencies of space, and at the special request of the French committee, the Exhibition will be limited to architects to whom invitations have been issued, and to executed work, but it is anticipated that within those limitations it will be fully representative of the various branches of British architecture, such as Ecclesiastical, Domestic, and Public Work; together with an Historical section so arranged as to show clearly the gradual evolution of modern British architecture, starting from about the year 1500, in the various branches enumerated above. A few selected examples of Garden Design and of Town Planning will also be included. As the Exhibition will consist very largely of perspective drawings, the committee have decided that where these have not been actually executed by the architect himself they shall be entered in the catalogue under the names both of the architect and of the draughtsman, as it is felt that this will lend an additional interest to the drawings and will set a precedent which should

remedy an injustice to many capable and brilliant draughtsmen whose work is too often ignored by the general public in exhibitions of this character.

It has been decided that Scottish and Irish architecture shall be arranged as far as practicable as separate sections on lines similar to the scheme adopted for English work; each will therefore comprise Historical, Modern, and Students' work, although modifications of this proposed scheme may be necessary later. A portion of the galleries will be devoted to holiday sketches and water-colours, which are justly much admired by our French colleagues, and the leading Architectural Schools have been asked to make a selection from the work done by students, which will also, no doubt, prove of considerable interest to French architects. A small part of the Exhibition Hall will be reserved for French students' work, and the committee of the Société des Architectes diplômés are arranging to exhibit a selection from the Exhibition which was held in the Architectural Association Galleries last year.

It is manifestly difficult to estimate the importance of an Exhibition of this character, but the committee feel that it will serve a very useful purpose in strengthening the bonds of artistic brotherhood between architects in the two countries, and lead to a juster appreciation of the high standard of architectural achievement which is a noteworthy feature of modern British architecture.

P. CART DE LAFONTAINE,

Hon. Sec. Exhibition Committee.

The New British School at Rome.

Prince Arthur of Connaught, presiding at the Second Meeting of the Council of the British School at Rome, held at St. James's Palace on the 16th ult., said that the Reports of the Executive Committee and Faculties presented to the meeting showed that much useful work had been accomplished since the Council had last met to receive their Charter of Incorporation. It was encouraging to know that during a time of transition in the life of the School there had been an increase in the number of students pursuing their studies in Rome under the auspices of the Faculty of Archaeology, History, and Letters, and that with the recent arrival of the holders of the newly established Art Scholarships the number of students during the present Session would be larger than in any previous year. He had seen the work done by competitors in the Final Examinations for the Rome Scholarships in Architecture, Sculpture, and Decorative Painting which were offered last year for the first time by the Royal Commissioners for the Exhibition of 1851, and he thought that the Faculties who administered those Scholarships might be congratulated upon the success of the first competition. His Royal Highness went on to say that one of the matters mentioned in the Report of the Faculty of Architecture must be especially gratifying to the Council—viz., the valuable Architectural Scholarship

founded by the Royal Institute of British Architects in connection with the School, the administration of which had been entrusted to the Faculty.

The Executive Committee report that their attention has been mainly directed to the question of providing suitable accommodation for the School in the Valle Giulia. Practically the whole of the £15,000 granted by the Commissioners for the Exhibition of 1851 towards the building scheme is being expended in the reconstruction in permanent material of the temporary façade of the building erected for the Rome Exhibition and afterwards presented by the Municipality of Rome for the purposes of the School. The Report goes on:—

The architect's original plan of utilising as part of his scheme the galleries of this building has been replaced by a more practical and economical design which contains all the necessary accommodation within a much smaller area, thus making free for purposes of recreation and planting a portion of the site, which the Municipality have more recently enlarged by the grant of an additional strip on the eastern boundary. The cost of carrying out the amended scheme was estimated at £35,000, and the Executive Committee decided to expend the sum of £20,000 in providing the minimum accommodation required to allow the School as soon as possible to start on its new career. The contract for this work, which includes the erection of the studio wing, the library, and the residential quarters for the Director and the necessary staff, together with temporary accommodation for a few students, has been entered into with Messrs. Humphreys, Ltd., and a Sub-Committee consisting of the Chairman, Sir Aston Webb, R.A., and Mr. Reginald Blomfield, R.A., has been appointed to advise upon matters of detail connected with the contract.

It is expected that the portion of the building now under construction will be completed by October, 1914, and that the School will be able to move into its new quarters before the expiration of its lease of the premises in the Palazzo Odescalchi.

The Faculty of Architecture* report as follows:—

The scheme for the establishment of the Rome Scholarship in Architecture offered by the Royal Commissioners for the Exhibition of 1851 has been the main subject of consideration by the Faculty. Their recommendations regarding the conditions, value, and tenure of the Scholarship were submitted to the Commissioners and received their approval on July 17th, 1912.

The Scholarship, which is open to British subjects under the age of 30, is of the value of £200 per annum, and is tenable for three years. The scheme of competition as drawn up by the Faculty in the first instance was graduated and in three stages:—(1) An Open Qualifying Examination; (2) a First Competition, open to candidates selected in the first stage, to winners of certain prizes, and to candidates nominated by certain bodies at home and abroad; and (3) a Final Competition, open to not more than 10 candidates selected from the First Competition.

The subject for the Open Qualifying Examination, which was a Private Mausoleum, had to be completed within one month. Sixteen candidates entered for this examination and eight qualified. In the First Competition there were eighteen candidates, including five of those who had qualified in the previous Examination. The subject set was a Modern Technical University, and only seven of the candidates were chosen to compete in the Final Competition, which was held *en l'oye*

* The Members of the Faculty are:—Mr. Reginald Blomfield, R.A. (Chairman), Mr. W. R. Lethaby, Mr. E. L. Lutyens, A.R.A., Sir Robert S. Lorimer, A.R.S.A., Mr. Ernest Newton, A.R.A., Professor C. H. Reilly, Mr. John W. Simpson, Mr. Leonard Stokes, and Sir Aston Webb, R.A.

in London during a period of three weeks. The subject for this competition was a Modern Forum or Civic Centre.

As a result of the Final Competition the Faculty recommended Mr. Harold Chalton Bradshaw, a third-year student of the Liverpool University School of Architecture, for appointment to the Commissioners' Scholarship, and the award was publicly announced on October 25th.

The Faculty regret to report the comparatively small number of candidates for such an important Scholarship. They hope, however, that, as the scheme becomes better known among students of Architecture, the Scholarship will be much more keenly contested, and the standard of work all through the competition will inevitably rise.

With the view of facilitating the working of the competitions, especially in so far as Colonial candidates are concerned, the Faculty decided to modify the scheme for the second year and to reduce the number of stages to two, so that the Competition will in future be identical in form with those instituted by the Faculties of Sculpture and Painting.

The Faculty have recently undertaken, at the request of the Royal Institute of British Architects, the administrative control of the Jarvis Studentship, which is to be offered annually to the Student or Associate of the Institute who, in the competition for the Rome Scholarship, passes next in order to the winner.

The Studentship is of the value of £200 per annum, and is tenable for two years at the British School at Rome. The first of these Studentships was awarded to Mr. Louis de Soissons, a Canadian architect who had studied at the Royal Academy and in Paris.

The Faculty have, after careful consideration, drawn up the programme of work to be carried out by the Rome and Jarvis Scholars during their residence abroad.

The University of London School of Architecture.

The Annual Report of the University of London, University College, just issued, contains a general summary of the activities of the College. The most important events of the past year are, perhaps, the combination of the two Schools of Architecture, previously separately conducted at University and King's Colleges, under the name of the University of London School of Architecture, and the completion of the new building designed for its accommodation. This building has provision for over 100 students, and includes three large studios (50 feet square, 35 by 22 feet, 27 by 29 feet); a Museum, 50 feet square; a Cast Gallery, 48 feet by 28 feet; a Library, 35 feet by 22 feet; a Lecture Theatre, 46 feet by 28 feet, with two screens for double lanterns; a Class Room, 27 feet by 19 feet; and an Entrance Hall, 27 feet by 19 feet. There are also Private Rooms for Professors and Lecturers, a Diagram Room, Dark Room, Cloak Rooms, Lavatories, and additional rooms for new developments, which can be utilised as required. It is intended to use some of these rooms for a Department of Town Planning. The building has been beautifully fitted at the expense of and under the direction of the donor, who desires to remain anonymous.

The University College Committee will be assisted in the management and development of the new School by an Architectural Education Committee constituted as follows:—The Chancellor, the Earl of Rosebery; the Vice-Chancellor, Mr. W. P. Herringham, M.D. (Chairman); the Chairman of Convocation, Sir Edward H. Busk; the Principal of the University, Sir Henry A. Miers; Sir Herbert H.

Bartlett; Prof. S. D. Adshead [F.]; Mr. Reginald Blomfield, R.A., President R.I.B.A.; Dr. J. J. Burnet, A.R.S.A. [F.]; Prof. W. E. Dalby, F.R.S.; Mr. Ernest Newton, A.R.A. [F.]; Hon. R. C. Parsons; the Principal of King's College, Dr. Ronald M. Burrows; The Provost of University College, Mr. T. Gregory Foster; Prof. A. Schuster, F.R.S.; Prof. F. M. Simpson [F.], John Slater [F.], Prof. R. Elsey Smith [F.], Mr. Andrew T. Taylor, L.C.C. [F.], and Mr. Edward Warren, F.S.A. [F.].

The Liverpool Town Planning Conference: Report of Mr. Hastwell Grayson, R.I.B.A. Delegate.

The Conference and Exhibition organised by the Liverpool School of Town Planning was opened on Saturday the 7th March and lasted till the following Friday. Liverpool is an especially suitable centre for a conference of this character. It is famous for the activities of its Housing Committee; it is the seat of a growing Garden Suburb, created by the joint efforts of Lord Salisbury, as ground landlord, and the Co-partnership Tenants Company; and Port Sunlight, the pioneer of English Garden Cities, is only a few miles distant across the Mersey. Above all, Liverpool is the home of the only English School of Town Planning.

The Exhibition was held in the old Blue Coat School, one of the most interesting eighteenth-century buildings in the city, and the middle of a large gallery on the ground floor served for the Conference meetings. At one end of the gallery were exhibits of the Co-partnership Company, and a large model, to $\frac{1}{32}$ scale, of Port Sunlight, the latter bringing out very clearly the large proportion of land which has been given up to gardens, allotments, and open spaces. Close by was a smaller model of Bournville, and models, which could be taken to pieces, of houses and tenements. An interesting series of views and plans of the work now being carried out on the Kennington Estate of the Duchy of Cornwall was contributed by Professor Adshead. Round the Conference Hall were arranged views of old Liverpool and a large plan of the great new boulevards, averaging 120 feet wide, which encircle the town. At the other end of the room came students' designs showing how much the city would have gained if the principles of town planning had been better understood a century ago. Most interesting to surveyors and others contemplating town planning schemes were the several small galleries upstairs which were filled with great maps of actual town planning schemes, most of which have received the preliminary sanction of the Local Government Board.

The Exhibition contained much to attract the general public, and proved a mine of information for experts, especially those interested in the great schemes being carried out in Germany and the United States.

Lord Salisbury, who is one of the three great Liverpool landowners, performed the ceremony of opening

the Exhibition, and pointed out that until recently towns were largely populated by people who had been born and reared in the country, and he emphasised the necessity of giving the industrial classes, most of whom were now city-bred, better surroundings. Mr. Vivian, who followed, argued that with better housing accommodation the efficiency of the industrial classes would advance, and that in that respect housing schemes had a value that could not be represented in money terms.

Both Conference and Exhibition demonstrated that the housing element was uppermost in the minds of the promoters, and that the question of arterial roads and civic centres was comparatively subordinate. In fact town planning in England has a totally different aspect from town planning in America, where it is associated with magnificence in the centre of the city, and from abroad, where it is largely confined to arterial roads and traffic problems.

In the conferences, which were exceedingly interesting, a carefully selected chairman, after a few preliminary remarks, led the discussion point by point on the chosen topic. Perhaps Mr. Brodie, the Liverpool City Engineer, and Mr. Abbott, Clerk to the Rural District Council of Ruislip, succeeded in inspiring the most interesting discussions, on Road Making and Practical Points in Town Planning respectively.

HASTWELL GRAYSON [F.].

The Geffrye Museum of Old English Furniture.

The Geffrye Museum, Kingsland Road, Shoreditch, was formally opened to the public on the 2nd April. The building, which is an admirable specimen of early eighteenth-century work, was originally erected by Sir Robert Geffrye for his almshouses. When the inmates had to be moved to a more tranquil district the building was bought by the Peabody Trust, who proposed to demolish it and erect workmen's dwellings on the site; but the London County Council, with the assistance of the Shoreditch Borough Council and private individuals, took over the building, threw the gardens open to the public, and are converting the open space behind the building into children's playgrounds.

The County Council had been asked to establish a central museum to which students could resort, as a complement to the craft training, but it was thought that the object could be better served by a series of local museums devoted to each local trade. The Geffrye Almshouses being situated in the heart of the furniture-making industry, advantage was taken of the opportunity to acquire the buildings and adapt them as a furniture museum. Some of the exhibits are the property of the Council, the gleanings of demolished houses, while others have been lent by the Victoria and Albert Museum, the City Corporation, and private persons.

The series of small rooms is well suited for the display of the exhibits. The first room, which is devoted chiefly to ironwork, contains some old

English door-knockers and a fine seventeenth-century cast-iron window bay from Lincoln's Inn Fields. Other rooms are devoted to English furniture of different periods arranged chronologically, with the exception of one, which has some fine specimens of seventeenth-century Portuguese, Italian, and Spanish chairs. Other exhibits are carved mantelpieces, a beautiful carved desk with the arms of Oliver Cromwell, two seventeenth-century doors, one from George Street, Westminster, and the other from Horselydown Lane, Stuart bedsteads, an Elizabethan overmantel, a seventeenth-century coffin stool, spinning wheels, and chairs. There are also stair banisters and brackets of various periods, a collection of old locks and door-handles, and a number of old insurance company signs that were erected on the houses of policy-holders.

Exhibition of Indian Paintings, Victoria and Albert Museum.

The Board of Education announce that a loan exhibition of Indian Paintings has been arranged in the Indian Section of the Victoria and Albert Museum (Lower Gallery, Room 4).

The exhibition consists of more than 200 characteristic works of the New Calcutta School, generously lent by the Indian Society of Oriental Art, Calcutta, together with examples by artists of the same school lent by Mr. Havell and Dr. Coomaraswamy. In addition, Her Majesty Queen Mary has been graciously pleased to lend an important example of the work of Abanindro Nath Tagore, for some time Principal of the Calcutta School of Art, and one of the leaders in the movement. It depicts Tissarakshita, Queen to King Asoka, contemplating the destruction of his favourite Bodhi tree. All the paintings lent by the Indian Society of Calcutta were recently shown in Paris at the 22nd Exhibition of the Société des Peintres Orientalistes Français.

The New Calcutta School represents the development which has taken place in Indian art since 1896, when Mr. E. B. Havell reorganised the instruction given in the Calcutta School of Art on Indian lines, and brought together a representative collection of examples of Indian painting, sculpture, and architecture for the purpose.

In addition to works by Mr. Tagore, there are also included in the exhibition paintings by thirteen of his pupils, Nanda Lal Bose, the late S. N. Ganguly, and others, some of whom follow the traditional technique of Indian painters more closely than the rest. Two of them, Messrs. Ishwara Prasad and K. Venkatappa, are descended from families of hereditary court painters. Mr. Prasad, whose family were court painters to the Nawabs of Murshidabad, Bengal, in the 18th century, was discovered by Mr. Havell working as a designer in Manchester piece goods for a European firm in Calcutta. He is now a teacher in the Calcutta School of Art. Mr. Gogendra Nath Tagore, a very gifted amateur, who contributes to the exhibition a series of illustrations

of the life of Chaitanya and impressionist studies in the streets of Calcutta, has worked entirely under the tuition of Japanese artists.

The exhibition will remain open until the end of May.

English Neo-Classic Architecture.

Messrs. Batsford will publish on April 23rd Mr. A. E. Richardson's folio volume entitled *Monumental Classic Architecture in Great Britain and Ireland during the Eighteenth and Nineteenth Centuries*. The purpose of this book is to direct attention to the monumental qualities and academic aspect of English Neo-Classic architecture, which, from the period of its inception, at the beginning of the seventeenth century, until a comparatively recent date, shows a record of continuous development. It is profusely illustrated by examples from all parts of the kingdom.

The Ancient Monuments Act.

Lord Beauchamp, First Commissioner of His Majesty's Works, has appointed Mr. Harry Sirr [F.] an Inspector of Ancient Monuments in England, and to act as Secretary to the English Advisory Board established under the Act of 1913.

THE EXAMINATIONS.

The Final: Alternative Problems in Design.

The Board of Architectural Education announce that the designs submitted by the following Students who are qualifying for the Final Examination have been approved:—

SUBJECT XIII.

(a) DESIGN FOR A FIRE-PLACE.

| | | |
|-------------------|------------------|-------------------|
| Alison: W. | Hall: R. B. | Musmann: E. B. |
| Allcorn: W. J. | Hamilton: A. B. | Newbold: O. |
| Allen: G. | Head: G. L. | Owen: A. H. |
| Barford: J. | Hendry: M. | Pace: C. L. |
| Bennett: G. | Henshall: L. E. | Pennington: W. F. |
| Binnie: W. B. | Herford: T. W. | Robertson: A. W. |
| Bowes: R. | Hossack: J. D. | Robinson: N. S. |
| Brooks: C. J. | Howard: S. B. | Rose: G. A. |
| Butt: P. | Jacob: J. H. | Rowntree: C. |
| Callendar: G. W. | Jepson: H. N. | Ryan: H. A. |
| Charlewood: G. E. | Johnson: A. G. | Sanders: T. A. |
| Check: C. C. | Jones: W. O. | Shattock: L. H. |
| Ching: W. T. | Kassem: H. Z. | Shenstone: G. |
| Clark: C. J. | Kellock: A. D. | Silecock: A. |
| Cosser: G. A. | Koch: M. D. | Spence: A. T. |
| Davidson: G. | Langdell: G. A. | Stainsby: G. P. |
| Derry: D. C. | Lavender: E. C. | Stott: A. E. |
| Duncan: R. A. | Leadon: G. S. | Taylor: J. A. C. |
| Eaton: G. M. | Love: R. M. | Tebbutt: H. J. |
| Evans: T. C. | Loweth: S. H. | Thorpe: A. |
| Fincham: E. | Luyken: H. M. | Threadgold: R. A. |
| Forbes: A. | Macgregor: J. | Triscott: H. S. |
| Frater: R. | McKay: J. R. | Walker: J. B. M. |
| Fyfe: J. S. | Macmillan: A. L. | Walker: D. W. |
| George: B. | Maddock: R. H. | Walker: H. F. |
| Goodwin: H. T. | Maxwell: A. E. | Whitehead: H. M. |
| Gossling: H. F. | Medd: H. A. N. | Williamson: F. |
| Graham: R. G. | Moore: R. S. | Wilson: J. F. |
| Grant: J. D. | Mortimer: A. L. | |
| Hague: H. V. | Mowat: D. G. | |

(b) DESIGN FOR A FOOT BRIDGE.

| | | |
|--------------------|-------------------|--------------------|
| Adams: W. A. C. | Dickinson: J. | Moscrop: W. N. I. |
| Alison: W. | Dowsett: T. W. | Palmer: J. |
| Andrew: H. | Farrer: J. C. | Robertson: M. |
| Ap-Gruffydd: C. O. | Foale: W. E. | Rose: G. A. |
| Armstrong: J. R. | Ford: L. S. | Stainsby: G. P. |
| Aslin: C. H. | Gooder: F. E. | Swallow: J. C. |
| Bagenal: H. | Goodwin: H. T. | Terrill: W. E. W. |
| Barley: F. A. | Grellier: C. | Toothill: I. C. P. |
| Carey: J. | Head: G. L. | White: P. G. |
| Carreras: E. L. | Lavender: E. C. | Woodhouse: C. H. |
| Cawkwell: R. | Macpherson: A. A. | Wyatt: H. |
| Charles: H. L. | Matthews: J. B. | |
| Crossland: H. E. | Moore: J. | |

COMPETITIONS.

Mill Hill School Competition.

Members and Licentiates of the Royal Institute of British Architects must not take part in the above competition, because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

By Order of the Council,

IAN MACALISTER, *Secretary*.

MINUTES. XI.

At the Eleventh General Meeting (Ordinary) of the Session 1913-14, held Monday, 6th April 1914, at 8 p.m.—Present, Mr. H. V. Lanchester, *Vice-President*, in the Chair; 18 Fellows (including 5 members of the Council), 25 Associates (including 1 member of the Council), 5 Licentiates, and several visitors—the Minutes of the Meeting held 23rd March 1914, having been published in the JOURNAL, were taken as read and signed as correct.

The decease was announced of John Humphreys Jones, *Associate*, elected 1894, and Thomas McMillan, *Licentiate*.

Messrs. William Hornby Hatchard-Smith, *Associate*, and Ernest Fiander Etchells, *Hon. Associate*, attending for the first time since their election, were formally admitted by the Chairman.

The Chairman made a formal announcement of the Council's decisions under the provisions of By-law 25 with respect to a Fellow and a Licentiate of the Institute.

Mr. W. R. Davidge [A.] having read a Paper on THE DEVELOPMENT OF LONDON AND THE LONDON BUILDING ACTS, and illustrated it by lantern slides, a discussion ensued, and, on the motion of the Right Hon. Viscount Peel, M.P., Chairman of the London County Council, seconded by Captain Swinton, a vote of thanks was passed to Mr. Davidge by acclamation.

The proceedings closed at 10.35 p.m.

Books received.

The Georgian Society: Records of Eighteenth Century Domestic Architecture and Decoration in Ireland. Vol. V, with complete index to the Series Vol. I.-V. 4s. 1913. [Dublin University Press.]
Selected Etchings by Piranesi. With an Introduction by Professor C. H. Reilly. Series I. 8s. Lond. 1914. 2s. 6d. [Technica Journals Ltd., Caxton House, Westminster.]
Perspective Made Easy by Means of Stereoscopic Diagrams; A Series of Drawings giving the effect of solid models illustrating the general principles of perspective. By Charles E. Benham. Price 6s. 2d. post free; stereotype, 3s. 9d. post free. [C. E. Benham, 28 Wellesley Road, Colchester.]

